

# small air forces observer

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SQUADRONS OF THE ISRAELI AIR FORCE 1942-1992: PART V  
AFRICAN MAX HOLSTE BROUSSARDS: PART I  
CROATIAN AIR FORCE 1941-45: PART II  
GRUPO AEROTACTICO PARAGUAY

vol. 17 no. 4 (68)

December 1993



# SMALL AIR FORCES OBSERVER

## The Newsletter of the Small Air Forces Clearing House

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**SAFO EDITORIAL POLICY:** The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching aviation history, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material. Article published in SAFO can be reprinted provided permission of the author is obtained and the SAFO is identified in the reprint.

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**BACK ISSUES:** Either back issues or Xerox copies of out-of-print issues are available for all issues of the SAFO published. For a list of all issues and their content, send two 1st class stamps (or 2 IRCs) to the editorial office.

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list of persons seeking sponsors. If you would like to receive the SAFO but can not obtain US currency, a list of SAFCH members looking for someone to sponsor is also available from the editorial office.

**INFORMATION FOR AUTHORS:** Manuscripts may be submitted in any form; authors whose first language is not English may submit a rough translation of the text and the editorial office will put it into good English. Authors using a computer should send the manuscript on disc. Photo should be black and white prints although color prints can be used. If you want any photos returned, please mark "Return" on the back. All art work must be ready for printing. The layout should be such that when a page is reduced (if necessary) the drawing should fit into the 7.5 inch by 10 inch working area of the final page. Art work that does not fit this requirement will have to be cut and pasted to fit; no problem, but things might not look exactly as you want them to look. All work for the SAFO is voluntary and no payment can be made for published material.

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**LOST MEMBERS:** Anyone knowing the whereabouts of the following 'lost' SAFCH members please inform the editorial office (last known address included): E. Tronn, 2255 At. Mathieu Apt. 701, Montreal, Quebec; Alain La Pierre, PO Box 2102 2102A, Les Delicias, Maracay,

Venezuela; Michael Parr, #124 101 Tabor Blvd., Prince George, B.C. Canada; Richard Harrison, "Halcyon", RD 3, Box 3639A, Stroudsburg, PA; Ellis Estes, 5 W. Glebe Rd., Alexandria, VA. Gary Lepinski, 3311 32nd Ave. S, Minneapolis, MN.

**GUEST EDITORIAL:** "One bit of personal irritation I'd like to address about the reviews appearing in SAFO concerns the source of supply of these items. It seems lately I've been running across more and more reviews that pump up a particular product but give us no source of supply. Some examples of this would be the magazine 'Aero Espacio' in the last issue and '75 Anniversario de la Creacion de la Fuerza Aerea Argentina' in #66 which I, personally, am anxious to obtain. If you have correspondents on all continents I'm sure it's no problem but the information is useless to the rest of us if no addresses are included. Could we please ask reviewers to suggest a source of supply or even act as a source of supply if they have easy access to these items? I know SAFO often acts as a limited supplier and I think this should be encouraged even more, perhaps on a consignment basis. Thanks for an excellent publication."

Jim Lyzun (SAFCH #), RR#5, Thunder Bay, Ontario, Canada P7C 5M9

**COVER COMMENTS:** A Max Holste MB.1521 Broussard of the Gabonese AF at Camp I in Biafra in May 1969 during the Biafran Civil War. In the foreground are Count Carl Gustaf von Rosen, an unidentified Swede, and Willy Bruce. The same a/c is featured below. In the left background is the nose of a Biafra Baby. The first part of Hubert Cance's two-part series on African Broussards appears in this issue. (Gunnar Hagland via the author).

**PHOTO PAGES:** On the facing page are photos taken of a/c in the new national markings of Slovakia. See letter on page 123 for details. The photos on the back page are of a/c of the Paraguay AF. See the article on the Grupo Aerotactico beginning on page 121.



## AUSTRALIA

**AUSTRALIAN PLASTIC MODELLERS ASSOCIATION** (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues sea mail A\$27; air mail A\$30). Winter '93 (28 pages) "Modelling the Hawker Sea Fury FB.11 (Pt 2)" 4 pages including 4 photos, and review of plans, references, accessories, & decals. "RAN Sea Fury Colours" 8 pages including 12 side-view drawings with top and bottom plan views. "Iberian Air War, Part 1; Dewoitine D371/372" 5 pages with a short history and details on kit-bashing (no photos or drawings). "Belgian Hurricane I" 1/2 page including side-view drawing. Spring '93 (28 pages) "Swordfish in the RAAF?!!!" 2 pages on researching and building a 1/72 model of an RAAF Swordfish. [Editor's note: Although official RAAF records do not mention the Swordfish, but a recently discovered pilot's log several were operated from Western Australia over the Indian Ocean, but markings are conjecture. The author say, "Have we opened a new area of interest - detective modeling?"] "Allison-Engined Mustangs" 4 pages including 2 side-view drawings, plan-view drawings of wing variations, and modeling instructions. "76 Squadron at Fifty: Macchi at Twenty-Five" 9 pages including 8 photos and drawings of specially-marked MB-326. "Iberian Armoured War: Part 1" 3 pages including 1/76 and 1/35 scale-drawings of Renault FT. "Delta Update" one page including one photo of RAAF Northrop Delta. "Macchi Medley" 4 pages including 3 pages of RAAF MB326 schemes.

**NEWS AND VIEWS** (IPMS NEW SOUTH WALES, PO Box 637, Broadway, NSW 2007; 4 issues A\$30.00 air mail).

9-4 (28 pages) "A-26 Invader: Part 2" 7 pages including 8 side-view drawings. "Accurizing the Revell 1/32 scale Me 262" 8 pages including 15 photos, a pages of sketches of interior detail, and 4 side-view drawings. "Lockheed RF-80" 4 pages including 10 side-view drawings. "FW-190A" 1/2-page side-view drawing. "Messerschmidts (sic) over Malta" 2 pages including 6 side-view drawings. 10-1 (32 pages) "RAAF P-40N" 6 pages including 10 side-view drawings. "Marking Time in the Med." 4 pages including 8 side-view drawings of 12th AF (Spitfire, P-39, P-40L). "RAAF 25 Squadron" 6 pages including 8 side-view drawings (Vampire, AT-6, & MB-326). "Shamrock with Thorns" 5 pages including 5 side-view drawings and "Victory List" of W/C Brendan Finucane. "Kimpō Kapers: 77 Sqn Meteors in Korea" 3 pages including 16 photos. "Modelling Korean Meteors" 5 pages including 8 side-view drawings and a page of sketches.

## AUSTRIA

**OFH NACHRICHTEN** (Oesterrichische Flugzug Historiker, Pfenningeldgasse 18/2/14, A-1160, Wien. Write for free sample.)

3/93 (40 pages) "Die Vampire" 16 pages including 12 photos and 5 pages of 1/72-scale drawings of Austrian T-55s. "Caproni-Schulflug" 5 pages including 3 photos of Austrian Ca.100. "Pottier P 50P Bouvreuil" 4 pages including 4 photos and 1/72 scale drawings of modern Austrian light plane.

## CANADA

**RANDOM THOUGHTS** (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US \$20.00 in US \$22.00 elsewhere). 23/2 (24 pages) Three photos of Singapore A-4.

## CZECH REPUBLIC

**ZLINEK** (Jaromir Stepan, P.S. 8, 763 14 Zlin 12). Text in English.

#4 (32 pages) "Siebel Si 204" 19 pages including 28 photos, color cover painting, 3 pages of 1/72-scale drawings, 3 pages of drawings of interior & details, 10 color side-view drawings (Czechoslovak, Polish, & French) "MIG-21" 2 pages with color 3-view drawings and color photo of Soviet a/c. "The Su-17 Family, Part 1: Su-71G & Su-17" 7 pages including 5 photos, 2 pages of 1/72-scale drawings, and 2 pages of color drawings (4 views of camouflaged red '40' and side-view of natural metal red '10'. One page of 1/48-scale drawings of Soviet under-wing armament.

## DENMARK

**NYT** (IPMS Denmark, c/o Bjorn Jensen, Rosenvaegets Alle 6, 2100 Kobenhavn 0; 4 issues for 90 Dkr surface, 100 Dkr airmail). Each issue includes a two-page English summary.

#61 (30 pages) "Avia B-35 & B-135" 2 pages including 5-view drawing of B-35.1. "Avia B-71" 2 pages including top- and side-view of camouflaged Czech-built SB-2. "Argentinsk Learjet 35A" one page with 2 side-view drawings.

## ENGLAND

**IPMS MAGAZINE** (Ernie Lee, 51 Ball Road, Hillsborough, Sheffield, South Yorkshire S6 4LZ, 6 issues for £18.00 (approximately \$36.00. US subscription agent: Wise Owl Publications, 4314 West 238th St., Torrance, CA 90505; since exchange fluctuates write Joe for current rates).

4/93 (32 pages) "Two Spitfires Named 'Mary'" 3 pages including 4 photos and drawing of BBMF's Spitfire XIX. "Lion Tamer - American Style" 3 pages including one photo, 3 small 3-view drawings of color schemes, sketches of ejection seats, & modification required to change a Kfir into a F-21A. "Photo-Reconnaissance Lightnings" 5 pages including sketches of 7 nose configurations, 5 side-view drawings (Chinese, French, & 3 USAAF), and 3-view drawing of RAAF P-38E. "Modelling the Battle of Britain Memorial Flight: Part 2" 4 pages including 3 photos and 2 pages of sketches for building Lancaster PA474. "Sea Vixen TT2 XS587 of Flight Refuelling Ltd" 2 pages including 2 photos and 4-view drawing of colorful scheme.

**PLASTIC KIT CONSTRUCTOR** (PAMAG (Publications) Ltd., 3 Lowfield Court, Old Forge Business Park, Sark Road, Heeley, Sheffield, S2 4HG; 4 issues £ 17.00 approximately \$34.00. In USA/Canada order from J.J. Daileda, 4314 West 238th St., Torrance, CA 90505; since exchange fluctuates write Joe for current rates).

#34 (28 pages) "Sketch Pad: Portuguese A-7P Corsair" one page of sketches. "The Lightning Described" 3 pages including 7 photos of EE Lightning. "7 MIG-17F Fresco" one page with 4 side-view drawings (Angola, Mozambique, & 2 North Vietnam). "49th Pursuit Group over Darwin" 1/2-page with 3 side-view drawings (Tiger Moth & 2 P-40E). "RAAF Pilots in RAF Squadrons" 1 1/2 pages with 7 side-view drawings (Spitfires and Hurricanes). And, the usual multi-tude of kit reviews.

#35 (28 pages) "Sketch Pad: Dutch F-17-300M Troopship" one page of sketches. "25 Squadron RAAF" 2 pages with 8 side-view drawings of Vampire, T-6, & MB-326. Over 25 reviews of kits including Blue Rider Vickers FB5 Gunbus (Danish

markings), Esoteric Fiat CR20 (Italian markings), and Huma-Modell Gotha Go 145 (Austrian).

## FINLAND

**MALLARI** (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, no check accepted due to the high redemption costs).

#95 3/93 (16 pages) "Dornier Wal" 8 pages including 7 photos (German & Soviet) and 1/72-scale drawings of Soviet machine.

#96 4/93 (20 pages) "McDonnell F-101 Voodoo in 1/72" 10 pages including 11 photos (one Canadian). "Douglas XCG-17" 2 pages including 3 photos.

## FRANCE

**LA VITRINE DU MAQUETTISTE** (IPMS France, PB 149, 75961 Paris, Cedex 20, PB 149, 75961 Paris Cedex 20; 4 issues 150 FF).

#45 (44 pages) "Seafire III & F.15" 8 pages including 3 photos of French Seafire III, 7 photos of RN museum F.17, 3 small 3-view drawings, 5 sketches of details, and 6 photos of model.

**AVIONS: Toute l'Aeronautique et son Histoire** (39 rue A. Briand, 62200 Boulogne Sur Mer, France). [Editor's note: This magazine is highly recommended for small-air-force enthusiasts. If they ever come out with an English-language edition, they would wipe out SAFO.]

#5 July '93 (52 pages) "Camouflages et Marques de ML-KNIL (2eme partie)" 11 pages including 17 photos, 18 color side-view drawings (Martin 139, Buffalo, CW-21B Demon, Hawk 75, Hurricane, Koolhoven FK-51, CW-22 Falcon, Ryan STM, Piper J-4 Cub Coupe, B-25C, Lockheed L212, & Lodestar) in orange triangles. (See review of Dutch Decals elsewhere in this issue.) "L'Aviation Allemande en 1918: 1ere partie" 6 pages including 16 photos. "Le Hanriot 232: 2eme partie" 5 pages including 5 photos & 2 color side-view drawings of Finnish a/c, and 2 pages of 1/72-scale drawings. "Le Henschel Hs 123" 6 pages including 11 photos and 2-page cutaway drawing. "Le Mystere II: 1ere partie" 5 pages including 13 photos. "Le Macchi 200: 3eme partie" 5 pages including 12 photos. "Des Francais en Chine: 3eme partie" 6 pages including 18 photos and 4 color side-view drawings (Martin 139, Dewoitine D-510, Vultee V-11, & Northrop 2-E). "Le Mitsubishi A5M2a: de Fine Molds au 1/48eme" 2 pages with 5 color photos of model. Cover color painting of Chinese Hs-123.

#6 Aug. '93 (52 pages) "Le Bloch MS200: 1ere partie" 12 pages including 23 photos, color cover painting, 2-page cutaway drawing, and color side-view drawings. "Les Dewoitine D520 Bulgares" 3 pages including 5 photos and color painting of D-520 attacking USSAF B-24. "L'Aviation Allemande en 1918: 2eme partie" 5 pages including 10 photos. "Le Mystere II: 2eme partie" 7 pages including 15 photos and a 2-page 1/72-scale drawing. "Le Macchi 200: 4eme partie" 2 pages including 3 photos of a/c in Co-Belligerent markings. "Le Henschel Hs 123: 2eme partie" 7 pages including 12 photos (6 of Spanish a/c) and 4 color side-view drawings (Spanish & Chinese). "Le Savoia SM 79 en Espagne: 1ere partie" 6 pages including 12 photos. "Le Late 302 d'Aerovac" 5 pages on modelling including 12 photos of model.

#7 Sept. '93 (52 pages) "Le Mystere II: 3eme partie" 4 pages including 10 color photos. "Les Henschel Hs 129 Roumains" 5 pages including 7 photos and 3 color side-view drawings. "Le Savoia SM 79 en Espagne: 2eme partie" 6 pages including



16 photos and 4 color side-view drawings. "Le Potez 452: 1ere partie" 5 pages including 8 photos and a 2-page 1/72-scale drawing. "Le Bloch MB 200: 2eme partie" 8 pages including 11 photos and a 4-page 1/72-scale drawing. "L'Aviation Roumaine 1916-1918: 1ere partie" 5 pages including 14 photos. "Le Fokker C-XI W: 1ere partie" 8 pages including 10 photos, 2-page cutaway drawing, color cover painting, and 4 color side-view drawings. "Le Po-2 de KP: 1ere partie" 2 pages with 4 photos of model. #8 Oct. '93 (52 pages) "Le Fokker C-XI W: 2eme partie" 9 pages including 19 photos and color drawings of camouflaged a/c. "Le Potez 452: 2eme partie" 9 pages including 10 photos, color cover painting, 2-page cutaway drawing, and 4 color side-view drawings. "Le Mystere II: 4eme partie" 6 pages including 7 photos and 3 pages of sketches. "L'Aviation Roumaine 1916-1918: 2eme partie" 7 pages including 16 photos. "Aperçus du 22 Juin 1941: Bararossa: 1ere partie" 6 pages including 12 photos of destroyed Soviet a/c. "Le Bloch 200: 3eme partie" 6 pages including 17 photos. "Le Po-2 de KP: 2eme partie" 4 pages including 4 color photos of model and 7 color photos of real a/c.

## GERMANY

**MITTEILUNGEN** (IPMS Germany, Berggruenstrass 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).

3/93 (32 pages) "Fotoseite" 2 pages with 6 photos (Sablatnig C.II (3) and Albatros D.I, II, & Va). "McDonnell F3H Demon" 3 pages including 1/72-scale drawings of F3H-2.

4 93 (32 pages) "Fotoseite" 2 pages with 6 photos [USSR Su-7 (3) and French MS-221, 223, & 225. "Major Erich Hartmann" 8 pages including 10 photos of personnel and 2 pages of drawings of Hartmann's Bf-109G.

5 93 (32 pages) "Fotoseite" 2 pages with 6 photos (Gotha WD, Oeffas K, HB W.18, AEG C.IV, Rumpier 350 & C.I). "Hungarian Bf 109" 2 pages including 5 side-view drawings.

**IL NOTIZIARIO** (IPMS Italy, CP 182, 41100 Modena Ferrovia; one year 50,000 Italian Lira in Europe or US \$50.00 overseas).

1 93 (32 pages) "Mig-17" 5 pages including 3 pages of drawings showing stenciling, interior detail, etc. "Lo-Viz F-104" 4 pages including 4 photos and 1/72-scale, 4-view drawing. "Dornier Wal" 6 pages including 5 photos of Italian Wals. "Aerei Al-leanella Regia Aeronautica" 6 pages including 2 photos (Albacore & Blenheim) and 7 side-view drawings of enemy a/c in Italian fascist markings (P-38G Lightning, Blenheim IV, Albacore, Beaufighter IC, Swordfish, Walrus, & Lysander). "Rotabuggy: Una Jeep Volante" 2 pages including construction drawings and 1/76-scale drawings of the Rotabuggy flying Jeep.

**JP-4** (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

7/93 (98 pages) Color photos: Turkmenistan An-26 'EZ-25533'; Albanian Bandeirante 'ZA-ADA'; German Mi-8 with a "turtle deck"; Dutch F-16A 'J-009' & F-27 'C-4' operating over the former Yugoslavia; and NATO AWACS. "Altimetro a Zero sulla Savana" 8 pages including 11 color photos of Italian AF G-222 & HH-3F in Somalia. "Lo Strike di Mosca" 6 pages including 7 color photos of Sukhoi Su-24 Fencer. "Canadair in Spagna" 5 pages including 7 color photos of CL-215 & CL-215T in Spanish AF service. "Una Cicogna Speciale" 7 pages including 15 photos of Fiesler Storch

mission for the Co-Belligerent AF to rescue Allied pilots from behind German lines.

8/93 (98 pages) Color photos: Uzbekistan A.310; Russian An-28 'RA-28727' & Be-32 'RA-67205'; Turkish SF-260 '2-775' & '2-776'; Spanish P-3B; Mexican MD-530F; UN Mi-8; Croatian Mi-17 'H-207'; Ukrainian An-32 'UR-48004'; and Spanish CASA C-101. "Pronti al Fuoco" 8 pages including 13 color photos of Italian CH-47, AB.205, & A.129 in Somalia. "A Difesa del Brasile" 10 pages including 14 color photos (F-5E, MB-326, Tucano, AMX, Mirage IIIDBR, KC-137, S-2, EMB-121, & EMB-111A).

9/93 (98 pages) Color photos: Spanish SRF-5A & Mirage III; Norwegian F-16 '685'. "Flogger, tra Fishbed e Fulcrum" 8 pages including 9 color photos (Romanian, Czech, & Indian). "Super Eten-dard in Argentina" 6 pages including 9 color photos (one photo of Argentine Corsair '3-A-211'). "Il Tesoro della Heyl Ha'Avir" 6 pages including 12 color photos of a/c in Israeli Air Museum. "L'Uomo che non Amava l'Africa" 8 pages including 14 photos (Ca.101, Farman, Voisin) and color side-view drawing Ca.101.

## PARAGUAY

**MODELO TERAPIA**, IPMS-Paraguay, c/o Antonio Sapienza, PO Box 1900, Asuncion. [Antonio offers to send this to interested SAFCH members for \$1.00 each.]

1/2 Sept '93 (4 pages) "El Helibras Esquilo HB-350/UH-50 en el Paraguay" 2 pages with 2 side-view drawings and 2 drawings of unit patches. "F-86 Sabre" one page on modeling with a side-view drawings of a USAF RF-86 in Korea.

1/3 Oct. '93 (6 pages) "El MDD DC-10-30 en el Paraguay." 2 pages including 3 side-view drawings. "El Republic P-47 Thunderbolt en la Forca Aerea Brasileira" 2 pages on modeling with 5 side-view drawings. "Homenaje: Al Pionero de nuestra Aviacion, Silvio Pettirossi" one page with side-view drawing of Deperdussin 'T' 1914-1916.

## POLAND

**AERO TECHNIKA LOTNICZA** (Bartycka 20, 00-716 Warszawa 36. 12 issues US \$32.00.)

6-7/93 (40 pages) "Muzeum Smiglowcow w Buckeburgu" 2 pages with 7 color & 6 b&w photos. "Sikorsky UH-60 Black Hawk" 15 pages including 8 color & 9 b&w photos, 5 side-view drawings of variants, 2-page 1/72-scale multiview drawing of the UH-60A, and 2-page cutaway drawing. "Samoloty Zalewskiego" 4 pages including 7 photos and 2 small 3-view drawings of Zalewski's quad-raplanes. Two photos of RWD-5 'SP-AJU'.

8-9/93 (40 pages) "Lotnictwo Morskie Holsndii" 3 pages including 8 b&w photos (Lynx, Orion, Fokker F-27, & Beechcraft 200). "Vought F4U Corsair" 17 pages including 10 color photos, 11 b&w photos, 2 color side-view drawings (one French), 13 side-view drawings of variants, 2 pages of 1/72 scale drawings F4U-1, and 5 side-view drawings. "F-105 Thunderchief" 2 pages with 7 photos and 3 side-view drawings. "Muzeum Lotnictwa Polskiego" 2 pages with 7 photos.

**FANATYK PLASTIKU** (Marek Bronkowski, Slowackiego 4, Sandomierz.)

10/93 (32 pages) "Hurricane z Plastik" 4 pages including 2 photos and many sketches. "Ju-188 Plan 1/72" 3 pages including a 2-page scale drawing. "Bristol Blenheim" 3 pages consisting of 9 side-view drawings of Mk-I in RAF markings. Photos: 2 pages with 15 photos of interior of a Polish Su-24M4.

11/93 (32 pages) "Izraelskie OH-58A" one page including 2 side-view drawings and color paint chips. "Jet Ranger w Policji" 6 pages including one color photos, 16 b&w photos, and side-view drawing. "Malowanie i Oznakowanie: Bristol Blenheim cz. II" 2 pages with 6 side-view and 2 top-view drawings (all RAF a/c). "RWD-13 z Plastik" 2 pages including 5 photos and a page of drawings little, stickily things to add to the Broplan kit. "MiG-21 Nose Art" one page including 5 photos of Czech a/c.

## USA

**Chine Lines** (IPMS Seaplane SIG, c/o Bill Devins, 107 Troy Hills Rd., Whippany, NJ 07981. \$8.00 for 4 issues).

#5 Fall '93 (18 pages) "The 1926 Schneider Trophy Contest" 4 pages. "Macchi M.39 Atelier Noix 1/48" 4-page review of kit with building hints, factory 3-view drawing, and reproduction of kit's instruction sheet. "Curtiss R3C-2 Atelier Noix 1/48" One-page review of kit. "Further Reconnaissance" 3 pages of up dates on former articles including identification of floats used on Swedish Klemm, corrections for Danish insignia on Heinkel He-8, and discussion of the possible origins of the "Vichy Martin Maryland" on floats - could it be a misidentified Fiat-CMASA RS 14?.

**WWI AERO** (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$25.00 USA or \$30 overseas).

#142 (146 pages) "Langley's" 8 pages including 25 photos and 2 pages of scale drawings. "The Wright Stuff IVc: Model B Variants" 14 pages including 21 photos. "Burgess XIII: Trainers & Speed Scouts" 7 pages including 8 photos a 3-view drawing of HT-2 Speed Scout. "Synchronizers Pt III" 16 pages including numerous drawings. "Cockpits/Instruments" 7 pages of diagrams and photos. "Drawings" Bristol-Coanda; Sikorsky UN-4 (parasol-wing Jenny); Caudron N; Maurice Farman MF-11; and Marine Corps Curtiss F, F-5L, HS-1L, & HS-2L.

**SKYWAYS** (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$25.00 USA or \$30.00 overseas).

#28 (84 pages) "Consolidated Fleetster: Part III" 12 pages including 5 photos 7 pages of scale drawings. "Curtiss XS2C-1" 2 pages including 4 photos. "Ralph O'Neill in Mexico" 12 pages including 25 photos (Serie A, Serie H, Serie B, Sopwith 1 1/2, Brown Special, MS.35, Ansaldo A-1, Ansaldo SVA, Quetzacoati, Standard J-1, Anahuas, DH-4B, Jenny JN-4, Junker-Larsen JL-6, & Farman F-50). "Fleet Model 10" 4 pages including 5 photos and small 3-view. "Huntington Governor" 4 pages including 8 photos. "Skyways Gallery" 6 pages with 12 photos. "San Diego Aerospace Museum Grumman F3F-2" 5 pages including 8 photos. "Handley Page HP.39 Gugnunc" 3 pages including 3 photos and a 2-page scale drawing. "Civil Birds, mid 'Thirties" 6 pages with 18 photos. "Bloch MB 120" 2 pages including 4 photos. "More in Japanese Imports" 2 pages with table and 2 photos. "Pratt & Whitney Vultees" 2 pages with 3 photos. "Cockpits: Douglas World Cruiser" 3 pages 6 photos.

**PRI-FLY** (IPMS Washington DC, c/o Carol Fleckenstein, 13816 Choptank Ct., Centerville, VA 22020; 4 issues \$8.00 for US, \$9.00 all others).

#84 (16 pages) "Aircraft of the Aces: Marin la Meslee's Hawk 75A" 2 pages including 3-view drawing of camouflage scheme. "Monogram's B-26 'Hellcat': The Story behind the Decal" one page including side-view drawing and short history of the 17th Bomb Group.

## AEREI and AEREI MODELLISMO 1991-1993 ROUNDUP

The current back issue available and subscription rates are as follows:

	Aerei	Aerei Modellismo
Back issue available from	March 1992	January 1992
Back issue price	L. 12,000	L. 9,000
Subscription	L. 79,000	L. 77,000

Both magazines published an "extra" issue for August 1993; so there are 12 issues in 1993 instead of the usual 11. Publisher: Delta Editrice snc, Casella Postale 409, Borgo Regale 21, 43100 Parma, Italy.

### Aerei

- February '91: Display Determination exercise featuring 8 photos of Spanish AV-8, AV-8B, & Sea King; Italian Army Light Aviation with 8 photos of AB-205, AB-206, & A-109; 4 color photos of Venezuelan F-5A; Russian Campaign with b&w photos and color profiles of Italian Br.20 & MC.200, Croatian Bu.131 & Bf.109G, Romanian PZL P-23, Greek Gladiator, and Yugoslav IK-3 & Hurricane; the Gulf crisis with a drawing of an Egyptian F-16.
- March '91: Two articles on the Gulf War with 6 photos of Saudi Tornado, Kuwaiti A-4, and French Jaguar & Mirage; Japanese Air Force with 10 photos of contemporary a/c.
- April '91: A color photo of the AIDC Ching Kuo fighter prototype.
- May '91: Two long articles about the Italian Air Force including Desert Storm operations with 27 color photos of Tornado, AMX, H-3, A-129, F-104, G-91, MB-339, etc.
- June '91: Yugoslav Air Force with 8 photos; an article on the 1948 Arab-Israeli War with 11 photos of Israeli Spitfire, P-51, T-6, Auster, etc. and Arab G-55, Fury, Lysander, T-6, plus 2 color profiles; color photos of a Canadian CF-104 and a DDR MiG-29.
- July/August '91: Color photos of the first production Rafale, IAR-99, and Italian Tornado from Desert Storm; an article on the Singapore Air Force with 13 color photos of A-4, S.211, F-16, C-130, Hunter, Super Puma, UH-1, F-5, & E-2; an article on Swiss training including 6 photos of F-5, Hawk, Mirage, & PC-9; an article on the 1956 Suez Campaign with 11 b&w photos of Egyptian Meteor and Vampire. In all, a very rich issue.
- September '91: Color photos of German F-104 in special markings; South Korean F-4, F-5, & O-2; and an Italian Navy TAV-8B; an article on the AMX with 3 photos.
- October '91: An article on the 1991 IAT with color photos of Portuguese G-91, Turkish F-104, Canadian F-18, Dutch F-16, Belgian Alpha-Jet; a long article on French Mirages including 11 photos and a cutaway; 4 photos of Portuguese G-91 & Puma.
- November '91: 3 color photos of the first Italian Navy TAV-8B; articles on the Bulgarian Air Force with 18 color photos of MiG-21, MiG-23, & L-29; article on the French Navy with 15 photos of Super Etendard, Zephyr, & Alize; on the AMX with 6 photos; on the 1967 Arab-Israeli War with 10 photos of Israeli Mirage, Iraqi MiG-21, & Egyptian MiG-17; on the Darwin Air Museum with 7 photos of Australian Wessex and Sabre.
- December '91: Color photos of Portuguese A-7, French F4U-7, Greek F-104 (6 photos); an article on the air forces of the Balkan region with photos of Greek F-4, Bulgarian MiG-23, Yugoslav MiG-21 & O-2, Hungarian MiG-21 & Mi-8, Romanian

IAR-99, and Turkish F-4; a giant centerspread drawing of the Aermacchi MB-339.

- January '92: Color photos of the first Kuwaiti F-18D and Nanchang L-8 trainer prototype; a long article on NATO North European air forces with 16 color photos of Danish and Norwegian F-16, C-130, F-5, & Draken; an article on the Indian subcontinent including 14 photos of Indian MiG-29, Jaguar, Harrier, Su-7, Mi-8, & MiG-21 and Pakistani F-16, MiG-19, & Mirage.
- February '92: Color photos of an Indian Do.228 and the Shenyang FT-7P prototype; an article on the F-16 including color photos of Norwegian and Turkish machines; an article on Belgian and Dutch air forces with 11 photos of F-16, F-5, Alouette, Mirage, P-3, & Alpha Jet; 9 photos of a recently restored Spitfire IX in Belgian markings.
- March '92: An article on Aermacchi with 3 photos; an article on the MB.339C trainer with 5 photos of New Zealand's #66; and article on the Falklands/Malvinas War with 5 color photos and a drawing of Argentine A-4, Super Etendard, & Pucara; an article on the F-86 including photos of a Thai F-86L, an Australian F-86/CA-27, and a North (sic) Korean F-86F; an article on MiG-21 avionics with 2 color photos (Bulgarian and Yugoslav).
- April '92: Articles on Spanish and Portuguese air forces with 14 color photos of F-18, Alouette III, F-5, T-38, Mirage, A-7, Puma, & T-37; on USAF Museum's Macchi 200 Saetta with 5 color photos; color photos of Belgian Magister & T-33, Turkish F-104, Canadian T-33, & Swiss Hunter.
- May '92: Some color photos of first Kuwaiti F-18C, Ching Kuo fighter prototype, Spanish AV-8B, Italian TAV-8B, Indian Sea Harriers.
- June '92: Color photos of Chinese A-5 Fantan, Yugoslav O-2, South African MB.326, Bulgarian L-29 Delfin, Belgian Jet Squalas, Finnish L-90 Redigo, Syrian MiG-29; and article on the last flight of an Italian Fiat G-91R with 3 color photos.
- July/August '92: An article on the South-East Asian situation with photos of Malaysian and Philippine F-5, Cambodian Alcyon, Thai F-16 & CL-215, Philippine SF-160, Vietnamese An-2, Indonesian Nomad, & Malaysian TA-4.
- September '92: Color photos of Ching Kuo fighter, Belgian C-130, Swedish Saab 105, Dutch F-16, Czech Su-25, and Spanish C.101 Aviojet; a small article on French C-130 including 5 color photos.
- October '92: A photo of a Dutch Fokker F-27; an article on the dissolution of the French 4/11 Squadron with 9 color photos of Jaguar in special markings and an F-100; two articles on Greek Mirage and F-4 featuring 19 color photos; an article on the MiG-29 with photos of Czech and Ukrainian machines.
- November '92: Two article on Argentine jets with 20 photos of A-4, MB-326/339, Super Etendard, etc.; an article on training Greek pilots with 9 color photos of T-2 and T-37.
- December '92: Color photos of the first JAS-39 Gripen, Saudi Tornado, Spanish Mirage F-1, Saab 37 Viggen, and French Skyraider; two articles on the French AF with 9 photos of Mirage 2000 and 8 of Mirage IIIE; an article on the Swedish Acrobatic Team with 9 color photos of their Saab 105 including detail shots; color centerspread drawing of an Italian CH-47; b&w photos of Italian PV-2 Harpoons; an article on a recently restored Fiat G-59 trainer with 9 color photos including many details.
- January '93: An article on the Foch aircraft carrier with 13 photos of French Alize, Super Etendard,

Zephyrs, Frelon, & Dauphin; an article on German Alpha jets with 8 color photos; 2 color photos of recently restored Czech Spitfire IX; 5 color photos of Belgian F-16.

- February '93: An article on German F-4F with 9 color photos; an article on the Mirage 2000 with 5 photos.
- March '93: Nothing of small air forces' interest.
- April '93: Color photos of Turkish F-16D & F-4E, French Mirage F-1; an article about training in the Portuguese AF with 6 color photos of T-37, T-33, T-38, and Epsilons; 4 photos of Aermacchi AMX during a Middle East deployment; an article on the MC.205 Veltro recently restored by Aeronautica Macchi with 8 great color photos.
- May '93: Color photos of refurbished Piaggio PD.808 Italian EW a/c & Colombian Tucano; a long article on the Italian AF with 14 color photos of Tornado, AMX, F-104, MB.339, C-130, & Atlantic; an article on Operation Deny Flight with 8 color photos including 4 of ex-Yugoslav O-2, MiG-21, & n MiG-29; the giant centerspread color drawing is dedicated to the Su-25 and includes a color photo of a Czech a/c in non-standard camouflage.
- June '93: Just a few color photos in this issue: Indian MiG-29, Turkish F-100F, Czech and Pakistani MiG-19.
- July '93: Color photos of Egyptian L-39, Polish I-22 Iryda, Italian TAV-8B, South Korean P-51, Saudi Tornado; an article on the AMX and AMI's 103 Gruppo with 8 color photos; an article on Italian aircraft in Somalia with 9 color photos of Agusta A.129, CH-47, & AB.205.
- August '93: Color photos of G-222, Australian Navy Sea King in Somalia; the giant centerspread drawings is devoted to the JAS-39 Gripen.

### Aerei Modellismo

- February '91: A profile of the F-100 Super Sabre including 5 photos of Danish machines; an article on the Macchi 202 Folgore with 5 color and one b&w profiles of Italian WWII machines.
- March '91: A long article on Italian anniversary markings with 13 photos and references to the Tauro Model decal sheets.
- April '91: A modeling article on Italian Tornados in the Gulf War with details of the yellow camouflage (similar to FS 33594) and 4 color photos of the real a/c; an article about special markings on Italian Fiat G-91a with 7 color photos and references to the Tauro Model decal sheets.
- May '91: Nothing of Small Air Forces' interest.
- June '91: Nothing of Small Air Forces' interest.
- July/August '91: A b&w photo of an Italian Cobeliger AF Spitfire V; color profiles of Russian, Yugoslav, French, and Portuguese Spitfires.
- September '91: Nothing of Small Air Forces' interest.
- October '91: Color photos of an Italian navy TAV-8B; an article on the MC.202 fighter with some improvements to the Supermodel 1/72 kit.
- November '91: Converting a 1/32 Mirage 5 into a Kfir C.2; an article by a Polish author on the Su-25 with 12 photos of Czech machines.
- December '91: Nothing of Small Air Forces' interest.
- January 92: 10 color photos of the first Italian TAV-8B.
- February '92: Nothing of Small Air Forces' interest.
- March '92: An article on converting the Airfix 1/72 SM.79 into a SM.84 torpedo bomber; an article on

Continued on page 134.

# THE MAX HOLSTE MH 1512 BROUSSARD IN AFRICA

## Part I

### Deliveries to Africa:

Congo	4 to 6	1961
Ivory Coast	7	1961
Cameroon	7	1960
Benin (Dahomey)	3	1961
Burkina Faso (Upper Volta)	3	1965
Gabon	4	1961 or 1964
Madagascar	11	1961
Morocco	12	?
Mauritania	4	1961
Mali	2	1961
Niger	4	1964
Central African Republic	6 to 8	1961
Senegal	7	1961
Togo	2 to 4	1964

In addition, one or more Gabonese Broussards were used as hacks by the Biafran Air Force. These a/c retained their Gabonese markings and were piloted by mercenaries believed to be Swedish. The Forca Aerea Portuguese received 4 Broussards in 1961 which were sent to Angola only to be returned to Lisbon as not satisfactory for the local conditions.

### Sources for the drawings:

Morocco: photos from Pierre Truyen.  
Mauritania: Flying Review 7/66; EPA "Les avions Francais 1944/64"  
Chad: Air Britain 9/10 1984; Graphy Air decals sheet and instructions.  
Upper Volta: Air Pictorial 11/66.  
Togo: Aviation News, Vol. 4 No. 23.

Senegal: Air Pictorial 5/61.

Niger: Aviation News Vol. 4 No. 23.

Gabon: photos from Leif Hellstrom.

Cameroon: Avions de guerre No. 76.

Madagascar: Aircraft "A"; Air Fan No. 12.

Aircraft "B" HVDA 18.

[Editor's note: The remaining Broussard drawings will appear in the next issue of SAFO.]

### For the modeler

There is an excellent, but expensive, 1/72-scale, resin-cast kit of the Broussard made by the French firm, Graphy Air. This kit contains white metal and photoetched parts, and includes markings of a Chadian a/c on the decal sheet. This firm has stopped production, but some of the Broussard kits may still be on the market. There is a rumor that some of the Graphy Air molds have been transferred to the Hi Tech firm. Hopefully, these include the Broussard.

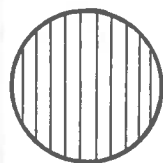
### Acknowledgements

All my thanks to Leif Hellstrom and Pierre Truyen for their very kind help.

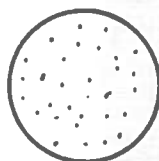
[Author's note: I would very much appreciate information on any African Broussards not illustrated in this present article. All such information will be presented in a further SAFO article.]

Hubert Cance (SAFCH #609), 56 Bd. E. Lintilhac, 15000 Aurillac, France.

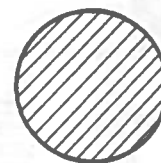
## MAX HOLSTE MH-1521 BROUSSARD COLOR CHART



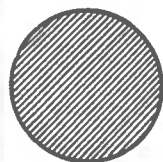
silver grey



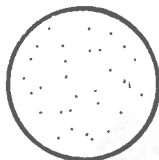
orange



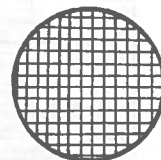
medium green



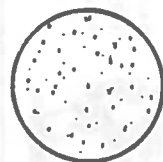
dark olive green  
(French Army green =  
Vert Armee)



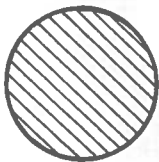
yellow



red

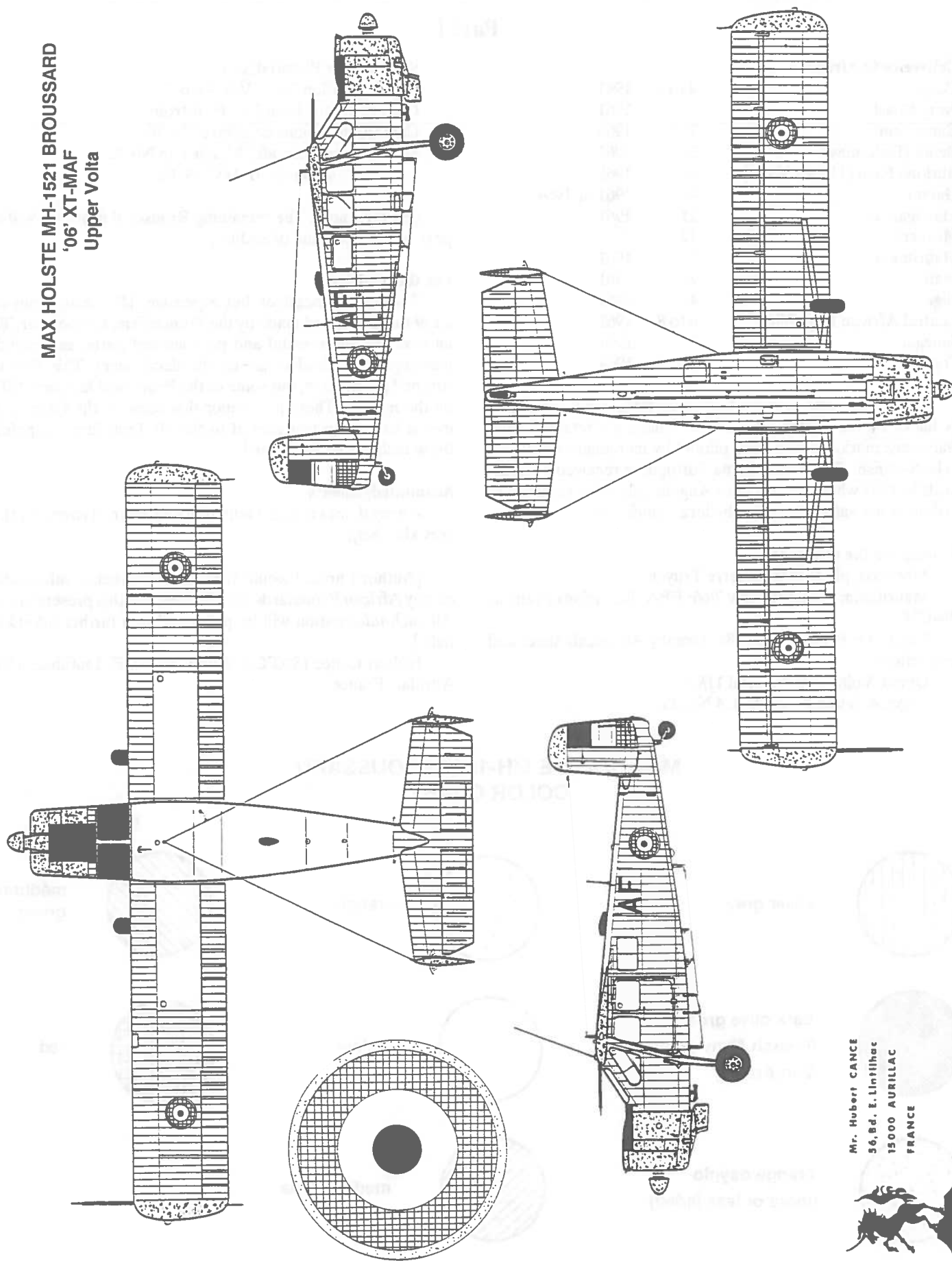


orange dayglo  
(more or less faded)



medium blue

MAX HOLSTE MH-1521 BROUSSARD  
'06' XT-MAF  
Upper Volta

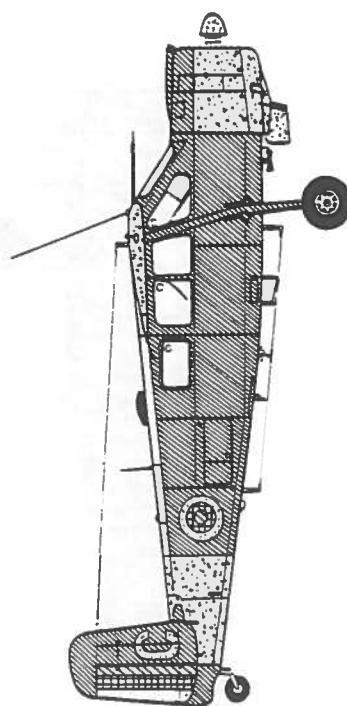
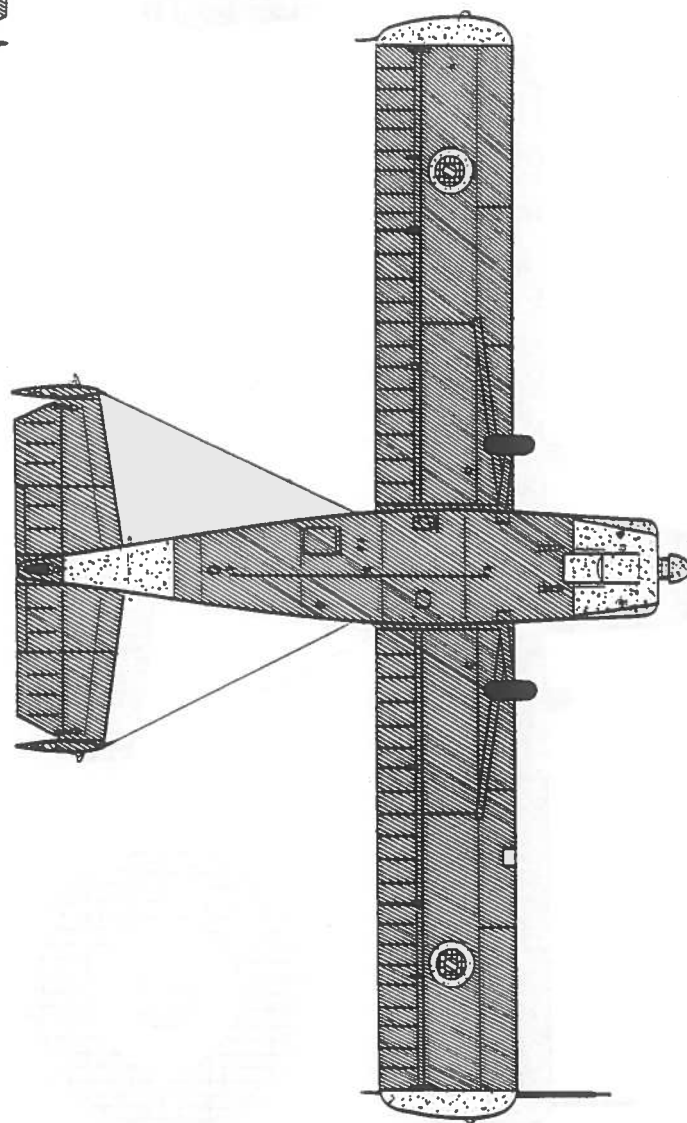
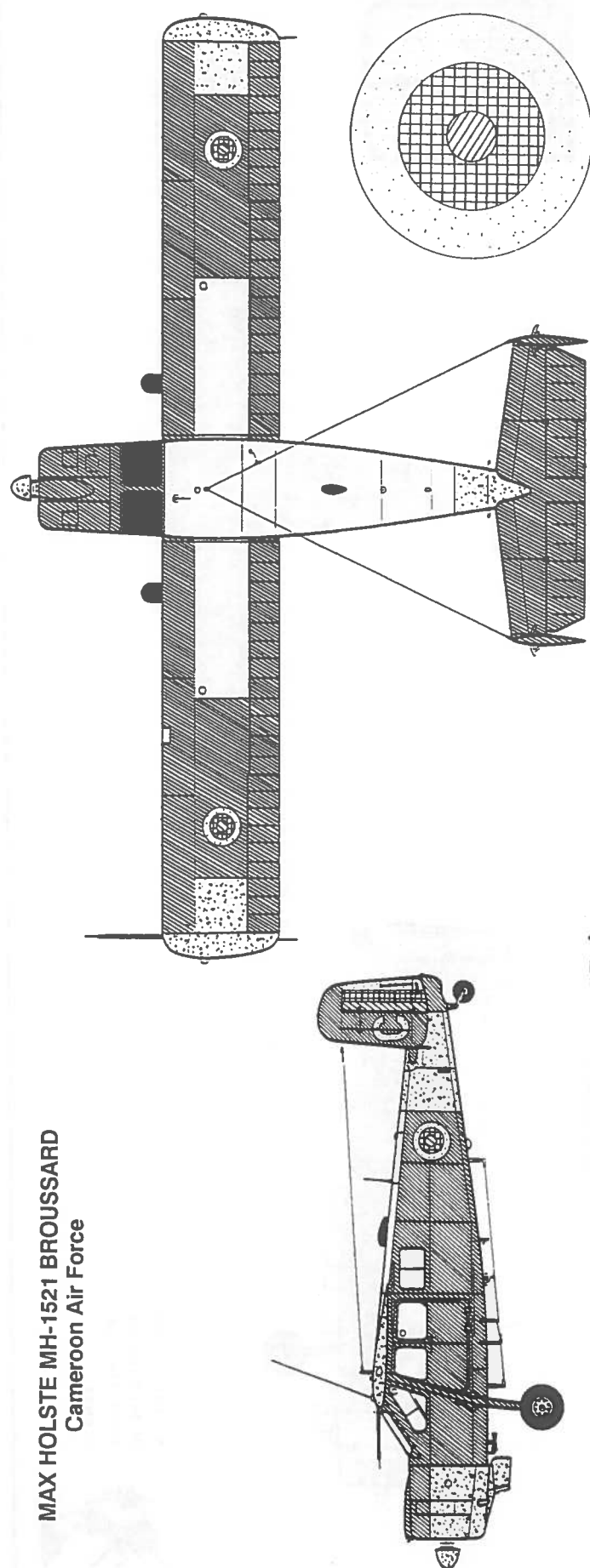


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15000 AURILLAC  
FRANCE





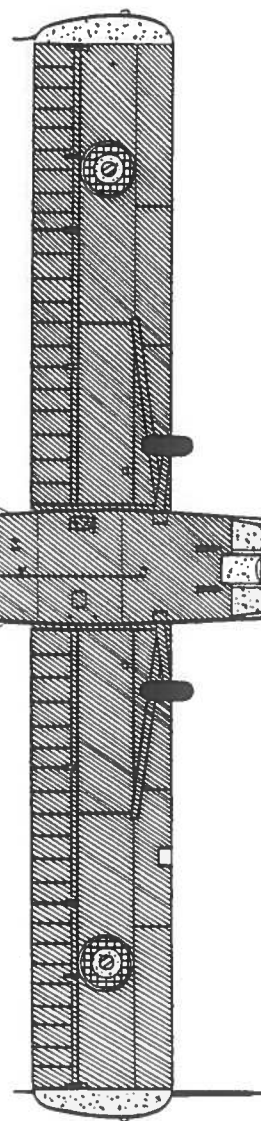
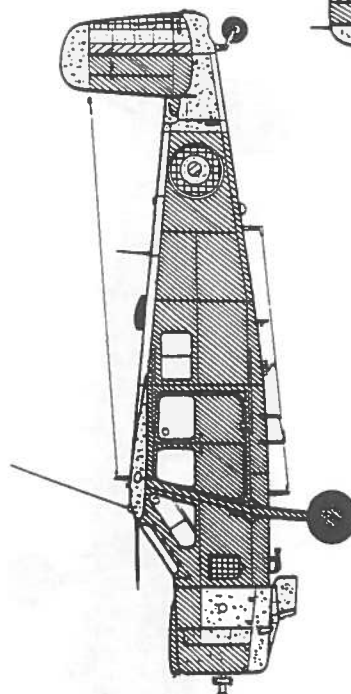
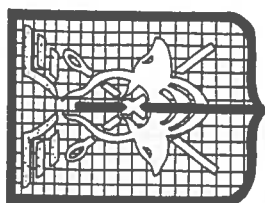
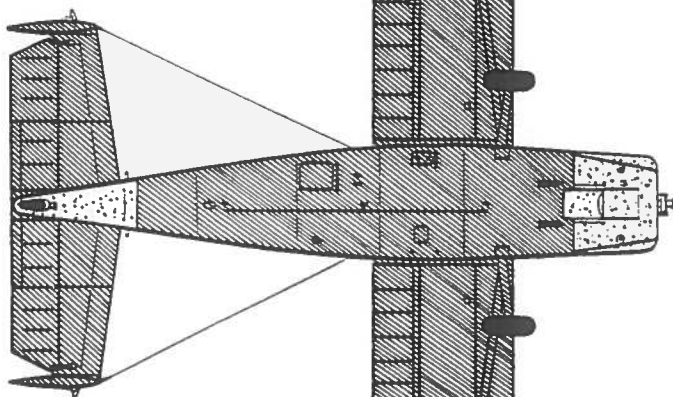
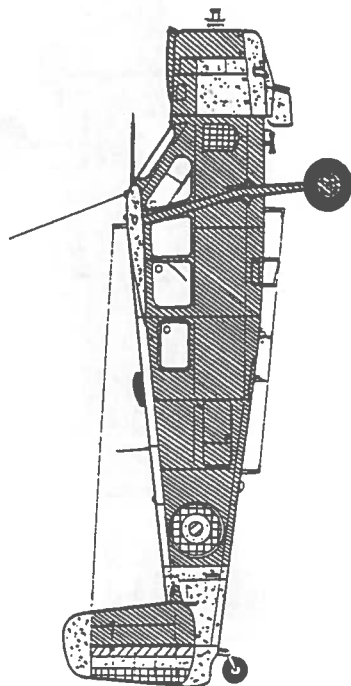
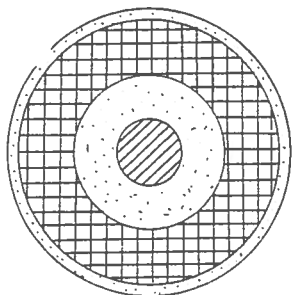
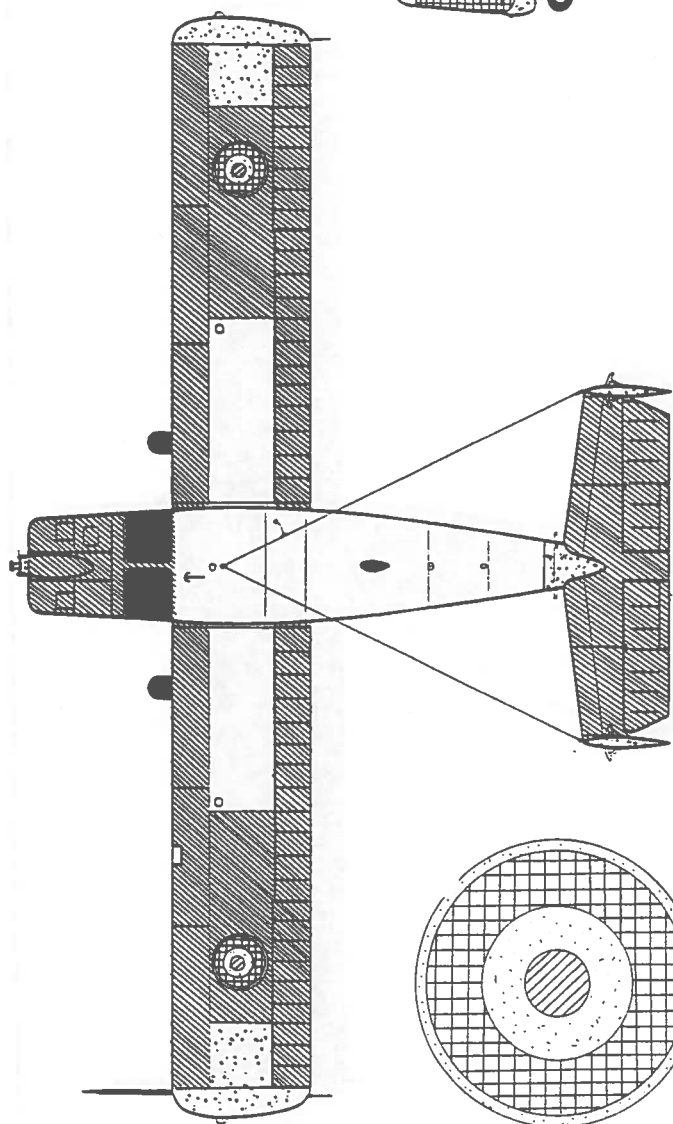
MAX HOLSTE MH-1521 BROUSSARD  
Cameroon Air Force



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15000 AURILLAC  
FRANCE



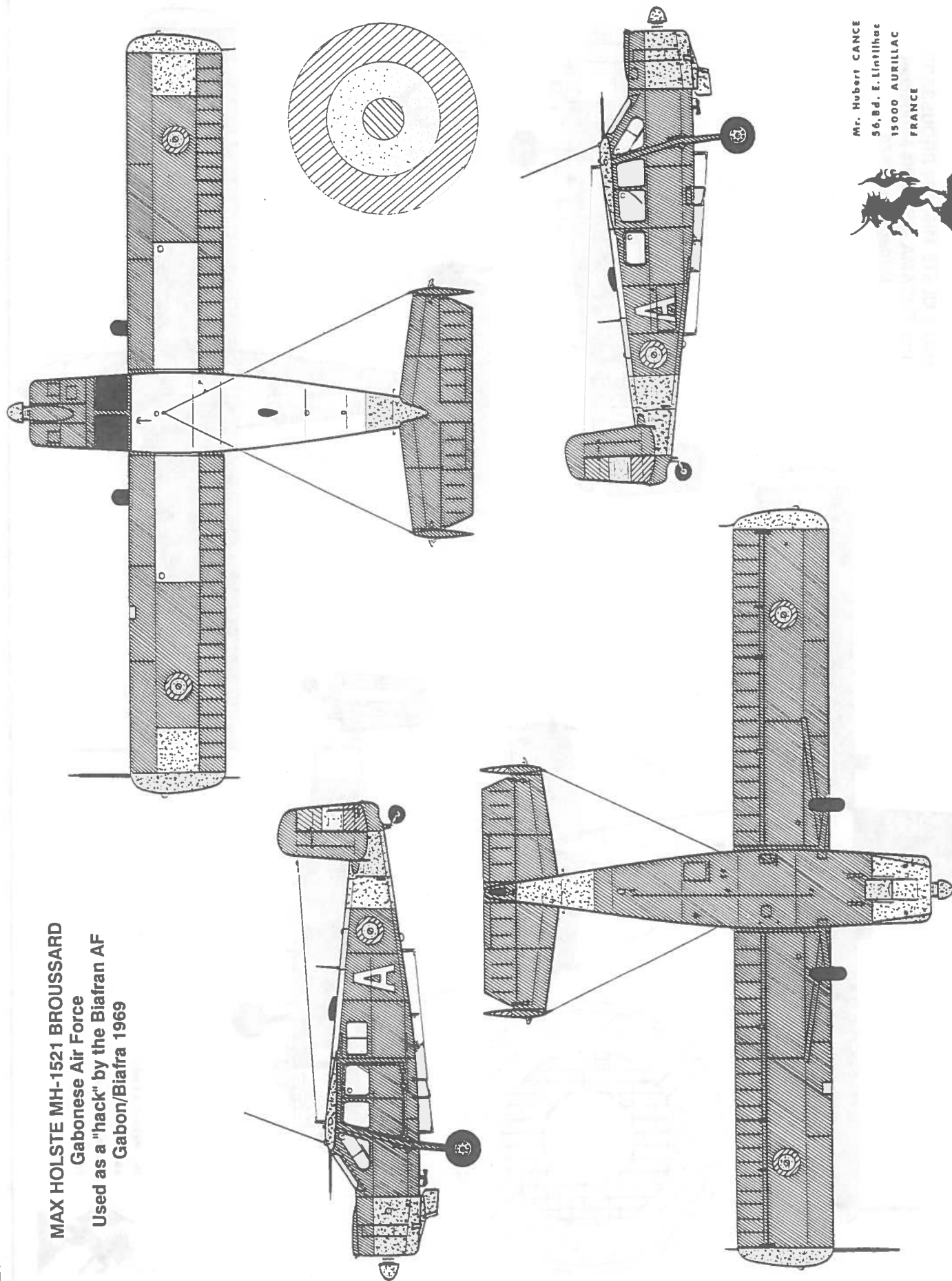
MAX HOLSTE MH-1521 BROUSSARD  
Escadre Tchadienne  
N'Djamena, Chad 1978



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15000 AURILLAC  
FRANCE



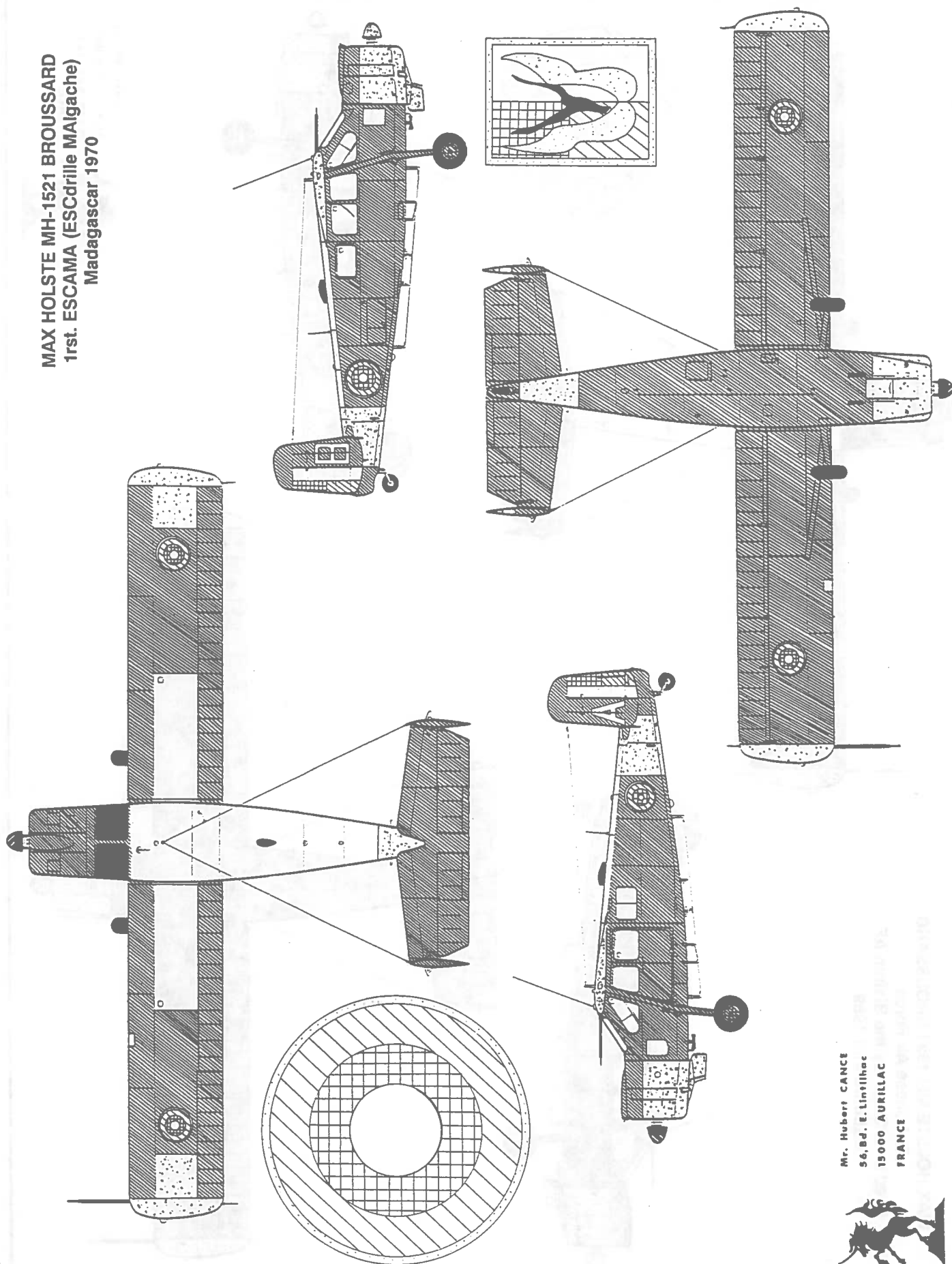
MAX HOLSTE MH-1521 BROUSSARD  
 Gabonese Air Force  
 Used as a "hack" by the Biafran AF  
 Gabon/Biafra 1969



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 15000 AURILLAC  
 FRANCE



MAX HOLSTE MH-1521 BROUSSARD  
1st. ESCAMA (ESCdrille MAlgache)  
Madagascar 1970



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15000 AURILLAC  
FRANCE



# CROATIAN AIR FORCE 1941-1945

## Part II: Bombers and Army Cooperation Types

Frederik Liege

Bomber types used by Croatian Air Force were all of German or Yugoslav origin except for a few Capronis from Italy. Ex-Yugoslav types retained their original camouflage and German types were in standard Luftwaffe camouflage. Dorniers used on the Eastern Front were crudely overpainted in white for winter operations.

Army cooperation types were mainly ex-Yugoslav machines captured, recovered from scrap yards, or returned from Axis hands. Germany handed back a large number of these machines to its politically-useful ally, but it is doubtful that Italy delivered more than a handful of combat types, because of their hostility to the creation of an independent Croatian state (for example, they strongly vetoed the creation of a Croatian navy).

Breguet XIX types consisted mainly of those powered by inline, Hispano-Suiza engines or Yugoslav-designed Wright-powered machines which, apart from the engine, differed from the French-designed Breguets in a slightly different wing design. Potez 25 A2 were, as well, Yugoslav-built, Jupiter-powered machines. I have recently received a copy of a photograph showing one of these machines with red (?) crosses on the fuselage, which seems to indicate its use as an ambulance aircraft.

Some ex-Italian machines were received after the September 1943 armistice, either captured (a very limited number) or delivered from German hands. Germany delivered various other types to Croatia both second-hand or war-booty machines. Most of these machines were obsolescent when delivered.

### Bomber Types

Amiot 143M: One example acquired in 1941, probably from German hands. Serial 1701.

Avia-Fokker F39: one ex-Yugoslav machine. Serial 1801.

Bristol Blenheim Mk I: 8 examples serialised 1501-1508. Some sources state 15 machines. One example was delivered from Germany in 1941. Serviceability was poor and the type saw limited service apart from some anti-partisan duties over Bosnia and training. One defected to Turkey in 1943 and two were recovered by Yugoslav partisans at the end of the war. The last of these served for transport duties until 1947.

CANT Z 1007: 3 machines used in the Croatian Air Legion under German command in 1944.

Caproni Ca-310: 6 examples, survivors of the 1941 campaign. Serials 1001-1006. At least 3 were of the initial production design. One example of the later design, with a fully-glazed nose, was captured on Zalužani airfield in 1944 and served in the post-war Yugoslav AF.

Caproni Ca-310bis: One example used from 1942; serial 1101. Origin unknown.

Caproni Ca-311M: 14 examples; 11 delivered in February 1942, came from an ex-Yugoslav order of 1941 and were probably Italian second-hand machines. Serials 1210-1214.

Caproni Ca 312: ex-Belgian order taken over by Regia Aeronautica in 1940. Some were used for second-line duty and training by Italian units in Yugoslavia and Albania and may have been captured there in September 1943. Before that, one ex-

ample (MM 12363), in Regia Aeronautica markings, was used for training Croatian student pilots at the Scuolo di Volo in Mostar. It is believed that about 10 machines served in Croatian hands.

Caproni Ca 313: Number unknown.

Caproni Ca 314: One example, probably captured on Mostar airfield in September 1943. Serial was 1301.

Dornier Do 17E: 30 examples, which may include F subtypes, delivered from Germany in 1943. Serial were either 301-330 or 3301-3330. Number 330 (3330?) survived the war and saw service in the new Yugoslav AF.

Dornier Do 17Ka: 11 Survivors of the 1942 campaign; serialised 1401-1412.

Dornier Do 17Z/M: 12 examples used from 1943, serialised 401-412. Eight machines of the Z subtype were probably survivors of 15/KG53, back from Russia. At least one Do 17Z surrendered at Klagenfurt, Austria, in April 1945.

Fiat BR 20: 6 examples. Used in 1944, probably as part of the Croatian Air Legion. Not confirmed.

SM 79-I: one or two ex-Yugoslav examples. The only serial known is 701.

Junkers Ju-87D/B-2: 16 examples. D subtypes were used in a mixed squadron with FW 190F in East Prussia from late 1944 until February 1945. At least one B-2 was captured on Sanskog Mostar airfield in 1945 and served with the JRV until 1947.

OV-Fremr bomber: 2 examples of this unknown (to me!) aircraft are quoted in IPMS-Germany sources. Can anyone help?

### Army Cooperation Types

Breguet XIX Jupiter: 26 ex-Yugoslav examples serialised 4501-4526.

Breguet XIX Lorraine: S examples, only known serial 4601.

Breguet XIX Hispano-Suiza: 5 examples, only serial known is 4901. Part I included a drawing of one of these with the serial 4534. Daniel Frka informed the author that this code was much more probably assigned to a Jupiter-powered machine.

Breguet XIX Wright Cyclone (Yugoslav variant): 10 examples, only serial known is 4701. NB: Some Breguet types were captured by partisans at various stages of the war and used intensively against the Croatian and occupation forces.

Dornier Do Y: One ex-Yugoslav machine captured in 1941.

Fieseler Fi 167A0: 11, 12, or 14 examples depending on the source of the information. Exact date of delivery not clear; either 1943 or 1944. Serials 4801-1812.

Potez 25 Jupiter: 41, 41, or 50 Yugoslav-built examples. Some were apparently used as ambulance aircraft. Serials 5001-5042 (5050?). One was delivered from German hands in 1942. One, together with a Breguet XIX, defected to the partisans in 1942.

Potez 63: 12 examples, ex-German war-booty machines. Supposedly delivered in 1943, but more probably in 1944.

Rozogarski R 313: Yugoslav prototype, reported to be lost when attempting to escape to Greece in the final stages of the



1942 campaign, but apparently recovered by the NDH. Fate unknown.

**Backword:** The following information updates information provided in Part I. Additional information on Croatian uniforms and units can be found in two new Osprey "Men-at-Arms" books: #131 "German Eastern Front Allies" and #147 "Foreign Volunteers in the Wehrmacht".

**FW 190F:** It seems that a mixed FW 190F/Ju 87D squadron was set up in late 1944 under Luftflotte VI command and fought in East Prussia.

**Avia B-534:** Mitja Marusko, of Ljubljana, Slovenia, told the author that Avia fighters in Croatian inventory is a myth. The only B-534 seen in Yugoslavia were machines with Yugoslav transit markings.

**Morane Saulnier MS 406:** Confirmation has been received that the Morane fighters supplied to Croatia were both MS 406 and MS 410 subtypes, and the total number of machines delivered was 48, with serials 2301-2348. Quite a large number of both types were captured by partisans at Zaluzani airfield, near Banja Luka, Bosnia, at the end of the war and entered service with the new JRV.

**Avia BH 33E:** 7 Ikarus-built machines were recovered from Yugoslav training units. Used for training duties only. Serials were 3301-3307.

**Macchi MC 205:** A recent article in the Italian magazine JP4 stated that some of the MC 202 fighter delivered in 1943 were of MC 205 type.

**Bf 109F:** F subtypes were in the initial batch of fighters sent to Russia as part of III/JG52 in 1941.

**Heinkel He 51:** Used for training at Zagreb's Luftwaffe Fighter School A?B 123, based at Agram airfield.

**Bf 109D:** As used by A/B 123.

**IK 2:** 3 examples were recovered from Yugoslav scrap yards and a fourth was returned from German hands in 1942, probably a captured examples used for evaluation.

**Hawker Fury:** One example was recovered in 1941, but records of any operational use have not been found.

**Bf 109G:** 15 Me 109G-10 and G-14 were delivered from Germany in January 1945, but only 10 reached Croatia, the remaining 5 being destroyed during the delivery flight. Two examples (G-10 #4 and G-14 #10) surrendered to US troops at Falconara (G-10) and Jesi (G-14), northern Italy, on 16 April 1945. When Croatia finally surrendered, only 5 machines were still operational. Most of these were incorporated in the new JRV. G-4 and G-5 subtypes were also used, probably, as part of 15/JG52.

**Fiat G50bis:** Because of contradictory sources, I am unable to state if the serials on the Fiat fighters were black, red, or yellow. Looking at the available photos of the G50 in the Belgrade Air Museum, the number 3505 could be red, but I cannot state this for fact. Can anyone help?

### Camouflage and Markings

The camouflage of Croatian aircraft was almost always that used by the former "owner". Ex-Yugoslav a/c had olive green on upper surfaces and light grey-blue lower surfaces. The insignia on the wing were painted only on the right wing, not on both sides. The Cross of King Zvonimir insignia was introduced in late 1944, but official orders were issued only in February 1945 when they were published in "Croatian Airmen" #8. These

crosses were always painted in the same orientation irrespective of position, port or starboard.

### Additional References

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Avijacija okupatorskih snaga i kvislinke NDH u četvrtoj neprijateljskoj ofanzivi januar-mart 1943, General Vojislav Mikic, Vojnoistorijski glasnik br.2-3/1987, br.1/1988, Beograd 1987/1988.

Neprijateljska avijacija u operaciji Svarc3, General Vojislav Mikic, Vojnoistorijski glasnik br.2-3/2987, br.1/1988, Beograd 1987/1988

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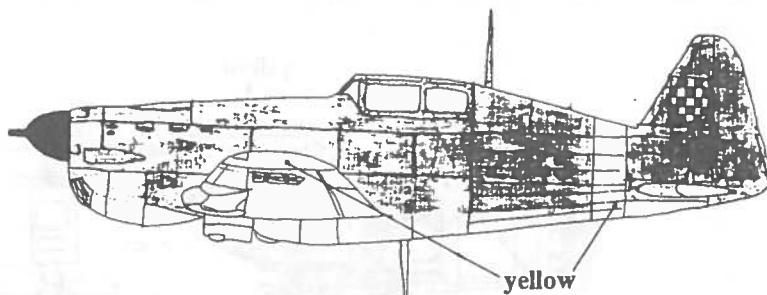
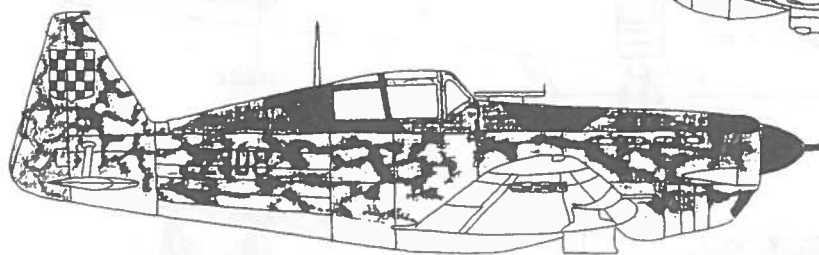
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Frederic Liege (SAFCH #1242), 325 Chemin du Saule, 84140 Montfavet, France.

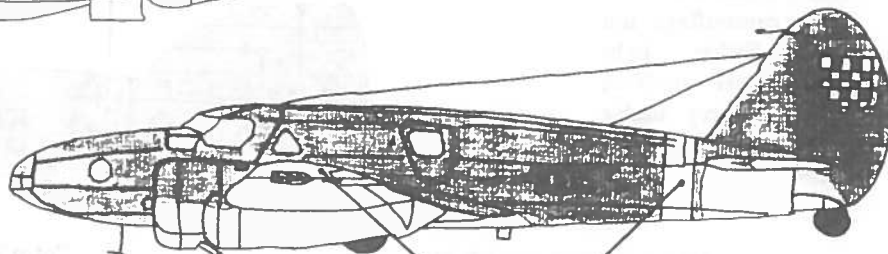
[Editor's notes: A two-part article by Daniel Frka on the 'Croatian Air Force in WW2' appeared in the June and July 1993 issues of SCALE MODELS INTERNATIONAL. The text covers both the a/c used by the Croatian AF and their operations against the Partisans. There's lot of interesting photos and some great color side-view drawings Thanks to SAFCH member Glenn Cekus for Xerox copies of these articles.]

**Morane-Saulnier MS 406**  
**Banja Luka airfield 1944**  
**Supposed to be Croatian**  
**fighter ace Cvitan Galic's**  
**machine**



yellow

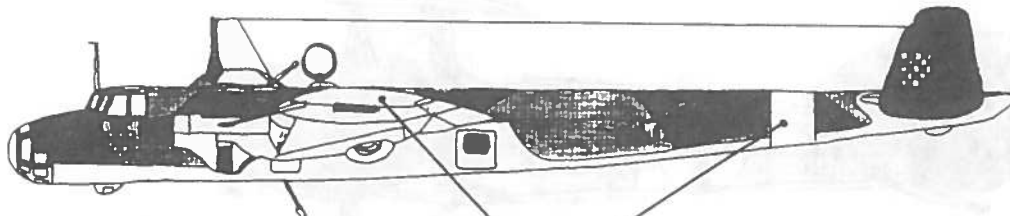
**Morane-Saulnier MS 406**  
**(410?).**  
**Standard Luftwaffe train-**  
**ing aircraft camouflage**  
**with probably light grey**  
**under surfaces.**



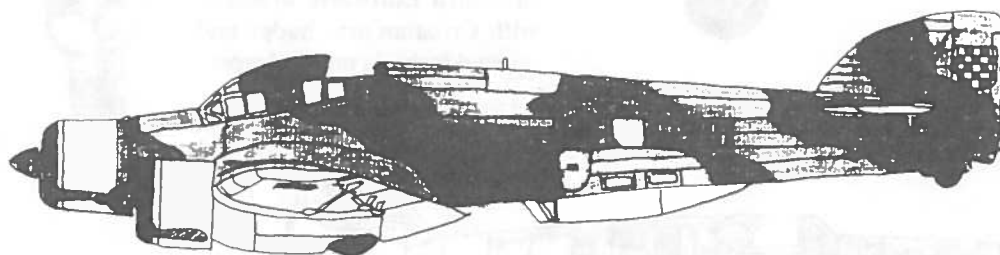
yellow

**Caproni Ca 310**  
**(initial production de-**  
**sign)**

**Do 17F.**  
**This particular ex-**  
**ample defected to Italy**  
**in 1944.**  
**Standard German ca-**  
**moouflage**

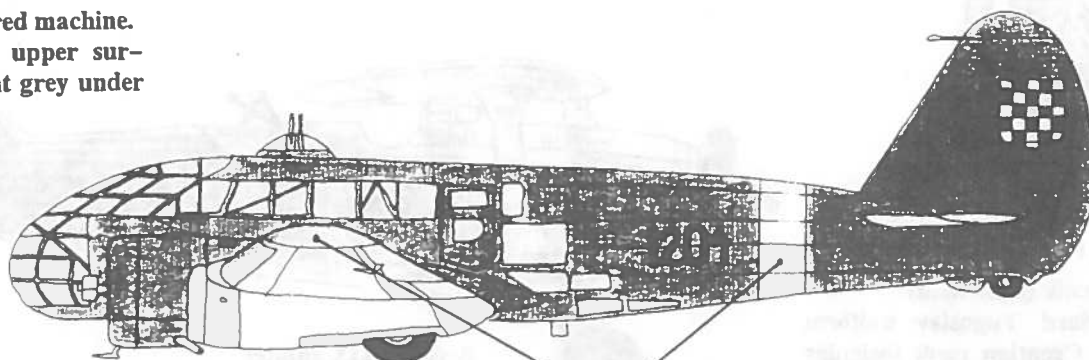


yellow



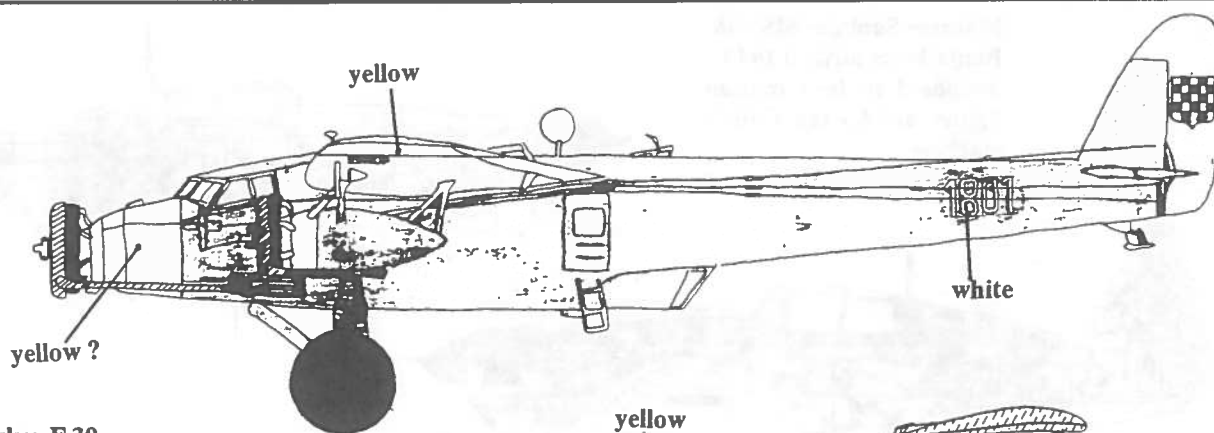
**Savioa-Marchetti SM 79-I**  
**Standard two tones (dark green,**  
**dark brown) Yugoslav camou-**  
**flage.**

**Caproni Ca 311**  
**Italian delivered machine.**  
**Italian green upper sur-**  
**faces and light grey under**  
**surfaces.**

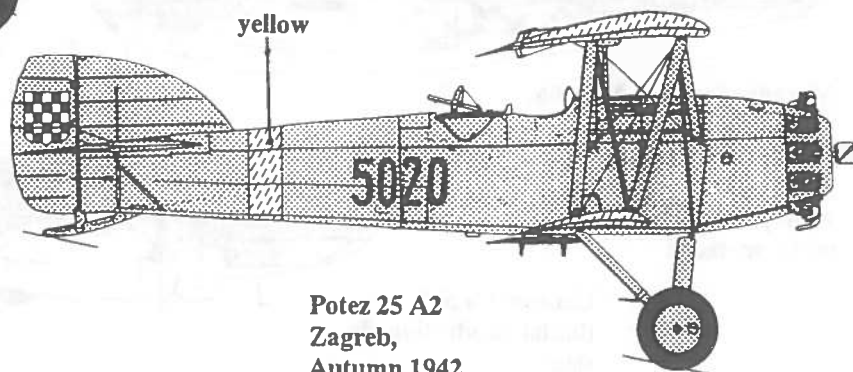


yellow

**F.Liège. August 199:**

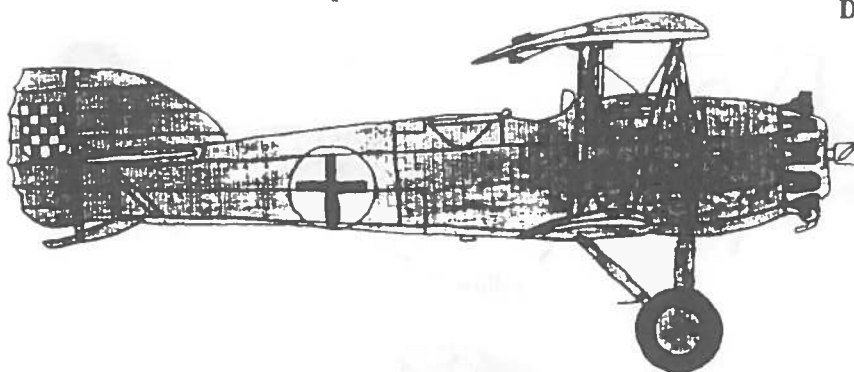


**Avia-Fokker F 39**  
Exact camouflage not clear. Either light green upper surfaces and light grey under surfaces or Yugoslav three-tone



**Potez 25 ambulance aircraft (?)**  
Bosnia  
Unknown unit and period

**Potez 25 A2**  
Zagreb,  
Autumn 1942  
Drawing by D.Frka



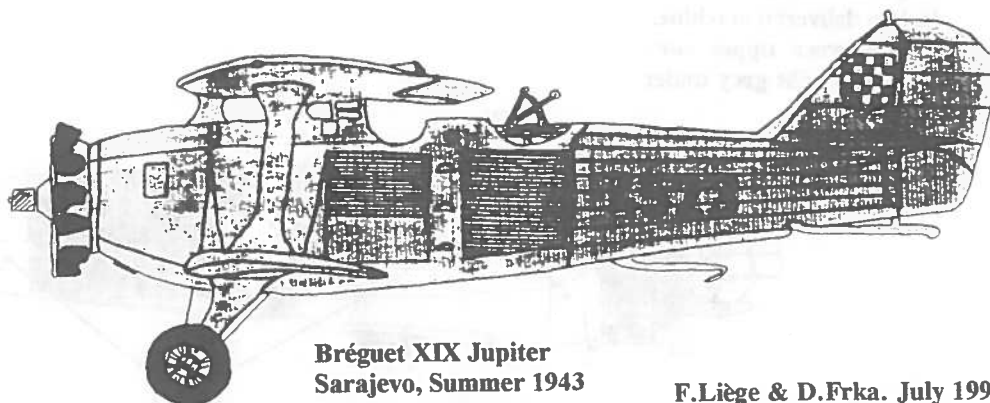
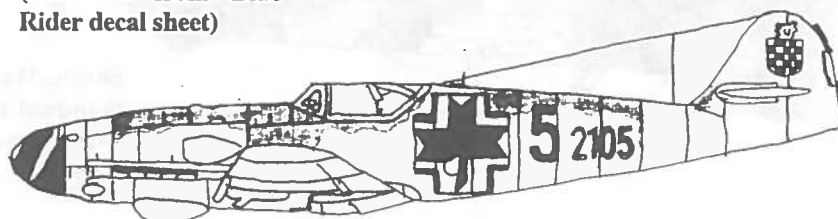
**Me 109 G10**  
Austria 1945  
(extracted from Blue Rider decal sheet)



**Pilot**  
Eastern front, 1942  
Standard Luftwaffe uniform with Croatian arm badge and winged insignia on the breast



**Porucnik (lieutenant)**  
Standard Yugoslav uniform with Croatian rank insignias on collar reverse.



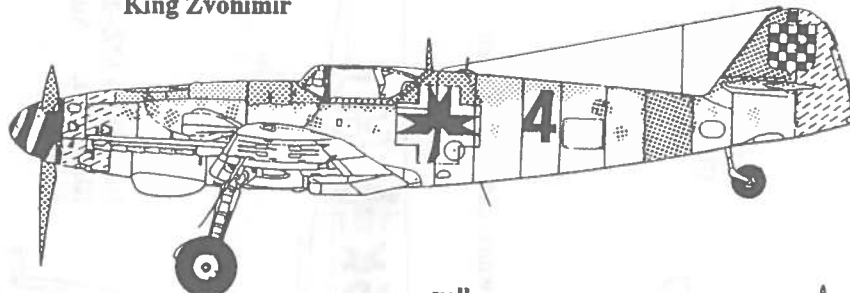
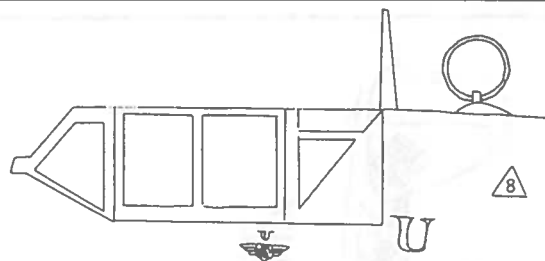
**Bréguet XIX Jupiter**  
Sarajevo, Summer 1943

F.Liège & D.Frka. July 1993



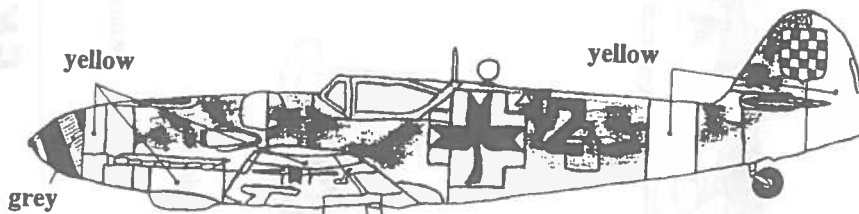
Cross of  
King Zvonimir

Particular markings,  
supposed to belong to  
Croatian commander  
Dzal. Type of aircraft  
supposed to be Me 109  
G-2, but not con-  
firmed.

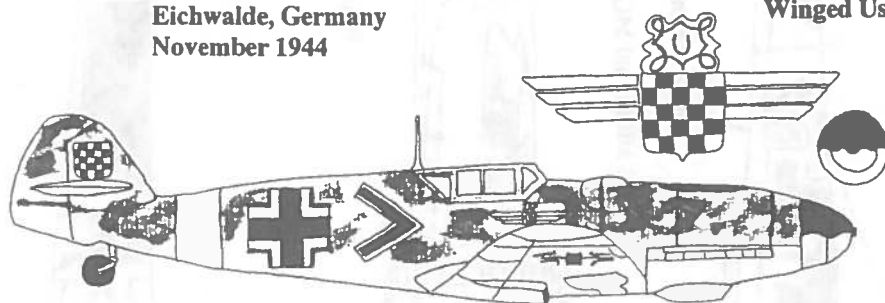


Me 109 G10  
15/JG52  
Falconara, Italy  
April, 16th 1945  
Drawing by D.Frka

Me 109 G10/U4  
Kroatische Jagdstaffel  
15/JG52.  
Jagdflieger  
OstPreußen  
Eichwalde, Germany  
November 1944



Winged Ustachi badge

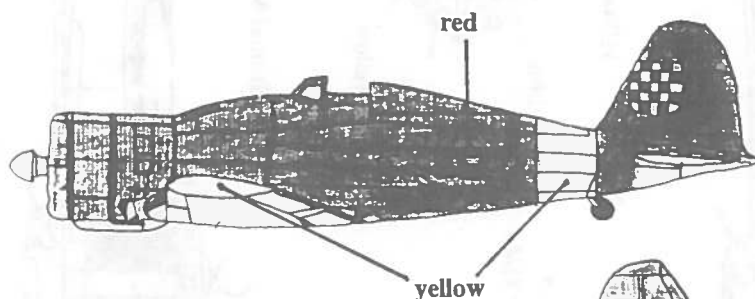


Me 109 G2  
10/JG 52  
Ukraine, 1942

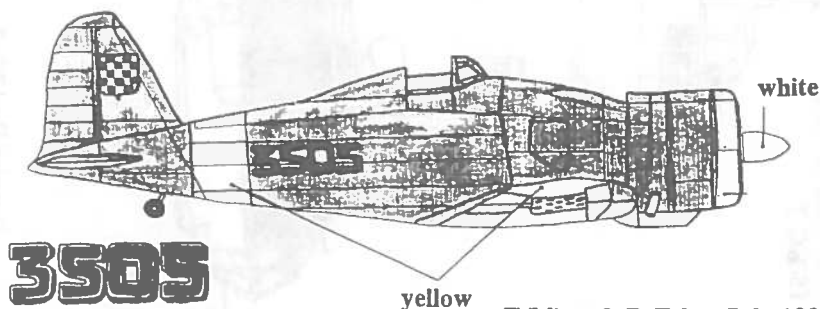
Ikarus IK 2  
Zagreb 1942  
Dark green upper-  
surfaces. Light grey  
under surfaces.



Fiat G50bis  
seen shortly after de-  
livery.

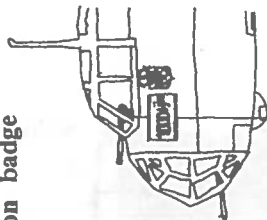


Fiat G50bis  
Definitive markings.  
Serial probably red,  
with black overshadow-  
ing, in Italian style.  
Dark green upper-  
surfaces, light grey  
under surfaces.



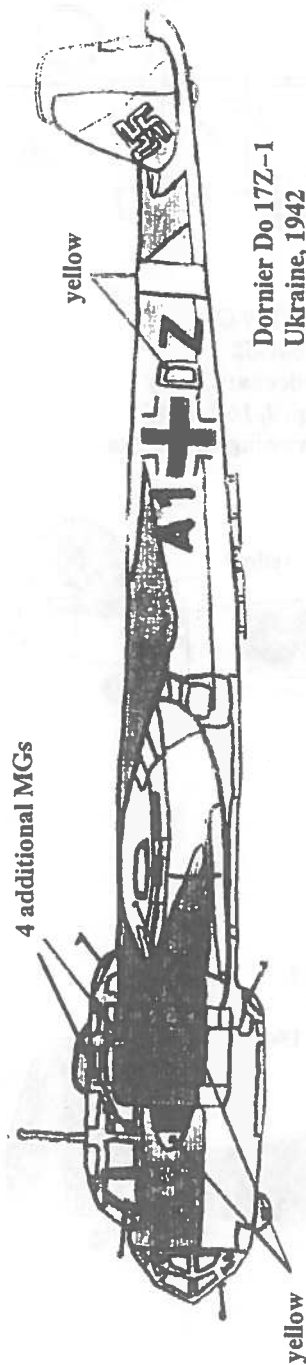
F.Liège & D.Frka. July 1993

1000th mission badge  
of 15/KG 3

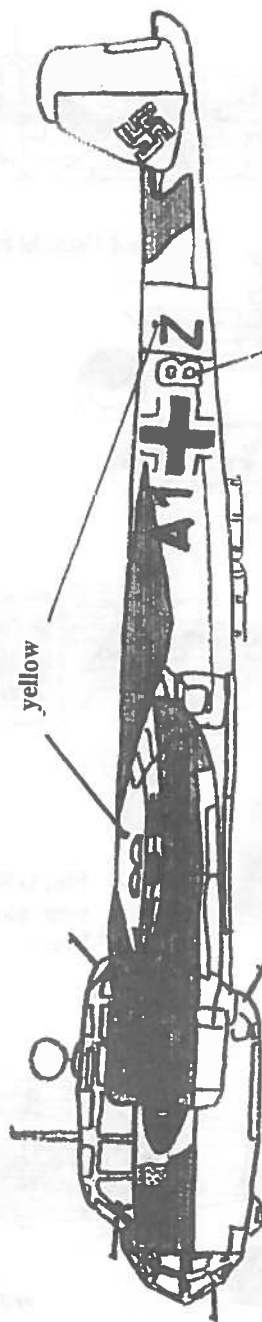


1000th mission badge  
of 15/KG 3

4 additional MGs



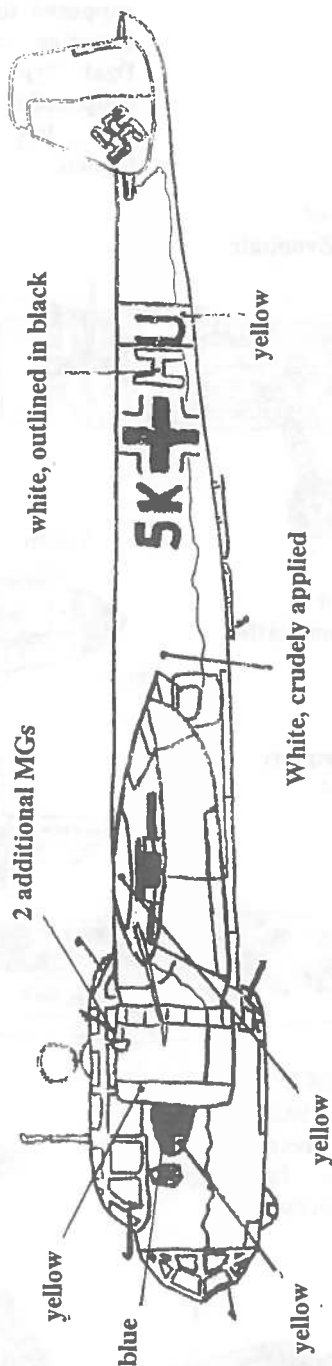
Dornier Do 17Z-1  
Ukraine, 1942



Dornier Do 17Z-2  
Ukraine, 1942

white, outlined in black

2 additional MGs

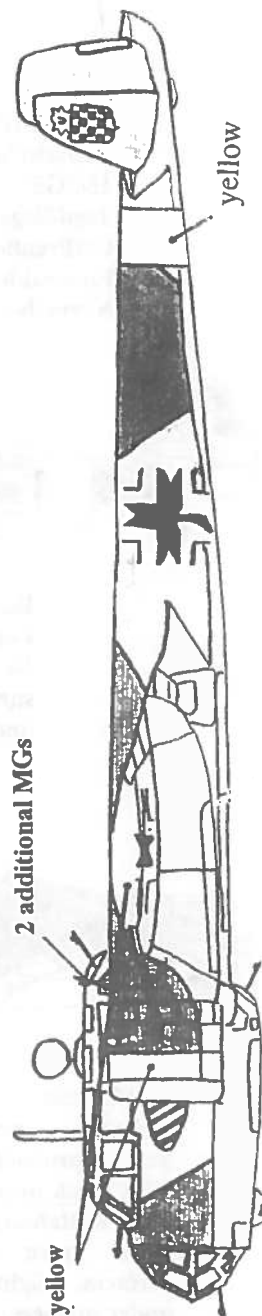


Dornier Do 17Z-2  
Ukraine, Winter 41/42

white, outlined in black

White, crudely applied

2 additional MGs



Dornier Do 17Z-2  
Klagenfurt, Austria,  
April 1945



# GRUPO AEROTACTICO: PARAGUAYAN AIR FORCE

Antonio Luis Sapienza

The Grupo Aerotactico or GAT (Air Tactical Group), the combat arm of the Fuerza Aerea Paraguaya, was created on 17 January 1980. Just twenty days before, on 28 December 1979, the FAP had received its first three Embraer EMB-326GB/AT-26 "Xavante" (the Brazilian version of the Aermacchi MB-326GB). Before the Xavantes, the ten North American T-6Ds of the "Grupo de Entrenamiento Tactico" or GET (Tactical Training Group) were the only combat element of the Paraguayan Air Force.

The FAP pilots and ground crews had received the training necessary to operate the Xavantes in Brazil and South Africa. Since a new terminal building had been built at the Asuncion International Airport, the old building and apron were available to house the planes and personnel of the GAT.

In 1980, the FAP decided to use four-digit serial numbers for all its planes. Therefore, the Xavantes were numbered from 1001 on. From January to June of that year, the remaining six Xavantes arrived in Asuncion to complete a complement of nine aircraft. Their c/n and s/n were: 1001 (79159402), 1002 (79160403), 1003 (79161404), 1004 (79162405), 1005 (80163406), 1006 (80164407), 1007 (80165408), 1008 (80166409) and 1009 (80167410).

All Paraguayan Xavantes were bought new from the Embraer factory in Brazil, so they were not ex-Brazilian Air Force, as many aviation writers have reported.

The Xavantes were the first jet aircraft to enter into active service in the FAP. Many aviation writers have claimed that the FAP operated ex-Brazilian Air Force Morane-Saulnier MS-760 Paris, and even some Cessnas T-37 Tweety Birds. This is false. The FAP did not operate either of these aircraft at any time. The only MS-760 Paris based at Asuncion was one belonging to the Brazilian Military Mission in Paraguay in the late 60s. It did not carry FAP emblems, but Brazilian ones. It was, however, used to give jet training to some FAP pilots.

On 10 September 1980, while some Xavante pilots were practicing low-altitude flights over Ypacarai Lake, near Asuncion, when aircraft serialled 1008, piloted by 1st. Lt. Cresencio Leyton, touched the surface of the water and crashed. The Xavante was totally destroyed and the pilot died instantly. This was the first fatal accident the FAP had with a Xavante. The lost aircraft was replaced by an Xavante acquired in Brazil in 1981. This plane received the s/n 1010 (c/n 81174417).

By 1984, the Xavante fleet had completed a total of 5,000 hours of flight in the FAP.

The FAP lost its second Xavante in 1985. While flying over the city of Caacupe, s/n 1002 experienced an electrical fire in the cockpit. Both pilots, Maj. Ruben Figari and Lt. Juan Benitez, ejected safely. A third Xavante (s/n 1003) was lost in 1988 when its pilot failed to recover from a flat spin; Lt. Duarte, ejected safely.

In 1987, the FAP acquired six Embraer EMB-312/T-27 Tucanos from the factory in Brazil. These were serialled 1051 (c/n 312-330), 1052 (c/n 312-333), 1053 (c/n 312-334), 1054 (c/n 312-335), 1055 (c/n 312-338), and 1056 (c/n 312-339).

With the arrival of the Tucanos, the GAT was organized in two squadrons: (1) "Guarani" Squadron: operating Xavantes as the First Fighter Squadron with two wings: "Orion" and "Cen-

tauro". (2) "Moros" Squadron: operating Tucanos as the Ground Attack Squadron with two wings: "Gamma" and "Omega".

On 19 October 1989, Tucano 1056 was flying a training mission near Ciudad del Este when it crashed at Itaipu Airport. It was flying at a low altitude in an inverted position when it hit a Cessna on the ground and finally came to rest against some cars in the parking lot. Both pilots, 1st.Lt. Juan Antonio Rojas Dure and Lt. Blas Rodriguez, died instantly.

During the Coup d'Etat that overthrew dictator Stroessner on the night of 2/3 February 1989, Xavantes flew with full armament loads and, at least one, was loaded with napalm bombs. No attacks were made because the dictator's bunker was in a residential area. In any case, the dictator was ousted after a few hours of land fighting.

The most recent GAT accident occurred in 1990, when Xavante 1001 was lost because of mechanical problems. Its pilot, the only crew member aboard, was Maj. Zander Nogueira, a Brazilian officer of the Military Mission in Paraguay. He ejected safely. In a period of 13 years, the GAT lost a total of five aircraft (4 Xavantes and one Tucano).

In 1990, during the visit of President Andres Rodriguez to Taiwan, the ROC announced the donation of 6 Lockheed T-33A to the FAP. These T-33s arrived in 1991 and were assembled by Chinese mechanics. The FAP pilots and ground crew received their training in T-33s from Uruguayan Air Force officers.

The T-33s belong to "Indios" Squadron. This, the Second Fighter Squadron of the FAP, is divided in two wings: "Tupi" and "Caciques". (This squadron was named "Indios" in remembrance of the 11th Fighter Squadron that fought in the Chaco War against Bolivia using Fiat CR.20bis fighters.) The T-33s have two 12.7-mm. machine guns in the nose and can carry a maximum of 454 kg of bombs on two underwing pylons. The FAP is probably the last air force in the world to begin operations on the legendary T-33.

The T-33s were serialled 1020 (c/n 1050, ex 56-1700), 1021 (c/n 1307, ex 57-0578), 1022 (c/n 1356, ex 57-0627), 1023 (c/n 1358, ex 57-0629), 1024 (c/n 1365, ex 57-0636) and 1025 (c/n 1418, ex 57-0689).

Since 1991, the FAP fighters have had the opportunity of simulated dogfights with American warplanes. In 1991, five Puerto Rican ANG Vought A-7D/K participated in the FAP's annual maneuvers. The Xavantes won 5 to 1 in close-in dogfights, but the A-7s used their Sidewinder missiles to take revenge in the long-distance fights. Both types of aircraft also participated in ground attack exercises. In that same year, four F-16A/B of the 157th TFS/169th TFG of the South Carolina ANG also came to Paraguay for maneuvers with the FAP Xavantes. In August 1993, five F-16A/B of the Puerto Rican ANG participated in the Paraguayan maneuvers with the Xavantes and the T-33s. One of the most impressive exercises was a simulated bombing of naval targets in Asuncion Bay. It is expected that these exercises will be repeated every year.

One word about maintenance of the GAT's planes. Major overhaul is done in Brazil for the Xavantes and Tucanos. Since the T-33 became operational just two years ago, no overhauls have yet been needed. It is believed that these will take place either in Uruguay or Bolivia, both of whom still operate T-33s.

The Xavantes, Tucanos, and T-33s are based in the Asuncion International Airport. Since this base is already overcrowded (GAT operates 17 aircraft), there are plans to move the T-33s either to the Concepcion AFB (where the T-23/T-35 fleet of the Training Air Group - GAI - will be housed when the FAP receive the appropriate budget), or to the Mcal. Estigarribia AFB in the Chaco Region,

## COLOR SCHEMES

The Xavantes of the FAP received the same color scheme used by the Brazilian ones. This camouflage consists of dark green (Humbrol 116/FS34079), medium green (Humbrol 117/FS34102), and tan (Humbrol 118/FS30219) on the upper surfaces. The undersides are light grey (Humbrol 64/FS36296). Paraguayan roundels are on both sides of the wings and on the rear fuselage. A tiny Paraguayan flag is painted on the vertical stabilizer. The s/n are painted in black square-style numbers immediately behind the fuselage roundels. The last two numbers of the s/n are painted on the nose of the aircraft.

The FAP Tucanos has the same color scheme as the FAB

ones. The camouflage is dark green (HU116), medium green (Hu117), and matt sand (HU63/FS30400) on top and matt light grey (HU147/FS36495) below. The rest of the details, roundels, s/n, etc. are the same as for the Xavantes.

The Lockheed T-33A wear the same color scheme as the Xavantes, except the lower surfaces are matt white (HU34/FS37875).

**Acknowledgments:** The author would like to dedicate this article to the memory of 1st Lt. PAM Jesus Cespedes, an excellent Tucano pilot of the FAP, who died on 27 November 1992 during a training mission in an Enaer T-35 Pillan. He was a devoted friend and the one who opened the doors of the GAT for those people like this author who are aviation enthusiasts. Special thanks are also expressed to Peter Steinemann and Horacio Decoud, who provided the excellent in-flight shots of the GAT aircraft.

Antonio Luis Sapienza (SAFCH #1160), Casilla de Correo No. 2721, Asuncion Paraguay.

## PHOTOS (page 136)

(a-c) GAT Xavantes near Asuncion, Feb. '90. (Peter Steinemann)

(d-e) GAT Tucanos near Asuncion, Feb. '90 (Peter Steinemann)

(f-g) GAT T-33As near Asuncion, Feb. '93. The F-16A is from the PRANG. (Horacio Decoud)

(h) GAT Xavante pilot. Asuncion International Airport, Oct. '93. (Antonio Sapienza)

## EMBLEMS

All photos by author.

(a) GAT insignia. Brown eagle with yellow beak and claws and red tongue on light blue background with black "FAP"; red, white, & blue (from top) flag with yellow "GRUPO AEROTACTICO"; yellow lightning flash with black border; and yellow border around shield.

(b) GAT fighter pilot's emblem. Blue background with white stars and "aircraft"; black "CONVICCION Y VALOR" and borders; red, white, blue (from top) flag at top.

(c) T-27 Tucano "Moros" insignia. White "face" with black details, green "mask" on right side and red, white, & blue (from top) stripes on left side; white moon; yellow sun; white "MOROS" on black; and black border.

(d) T-33 "Indios" emblem. Black details on white background with brown bow and feathers; red, white, & blue stripes on face.



a



b



c



d

"I am sending you some photos taken during the Slovak International Air Display 1993 at Kosice AB, Slovakia. Other a/c on exhibit were: MiG-21MF '7714', L-29 '2845', Mi-24 '0787', Mi-17 '0843', Su-25K '8074', and L-39MS '0002'. They all carry the new Slovak national insignia, but the former Czechoslovak camouflage scheme and serials are unchanged. The national insignia is situated in the usual six position in place of the Czechoslovak (now Czech) roundels. The dimensions of the new insignia are the same for all positions and on most a/c types. Of course, large transport types, e.g. An-12, have larger insignia." Daniel Petz (SAFCH #623), Na Ladvi 21, 182 00 Praha 8, Czech Republic.

[Editor's note: These photos, plus two sent by Kim Margosein, are published elsewhere in this issue. Color photos of Slovak Su-25K '8072' and Let L-410 '0405' appear in Summer 93 issue of the English-language edition of Air Action. Decals of the new Slovak national insignia are said to be on their way to me, so they should be available by the time you read this. I have no idea of the quality and content of these sheets, but the price will be \$3.50 for 1/72 and \$4.00 for 1/48 scale.]

"About the potential use of the Arado Ar-396 by small air forces of the former French colonies (SAFO #66, p.57), it seems there is no evidence of such utilization. During the war in Algeria (1956-1962), the Arado Ar-396s were progressively replaced by North American T-6 Texan and its stable follower, the T-28 Fennec and were sent back to France where they served in training units until the mid sixties. Ref: Docteur Pierre Riviere's article in AVIATION MAGAZINE #697 (01/77)."

Christian Hotte (SAFCH #902), 6 Impasse Santos-Dumont, F-44470 Carquefou, France.

"In going through the perpetually two-foot deep stack of research material to be cataloged, I came across the following letter from Maurice Rowe of Barnet, Herts., in issue #11 of WAR IN THE AIR 1939-45. 'Regarding the Winter War, I remember speaking to a naval officer in the 1950s and he told me that when serving on the Ark Royal they embarked Swordfish and Skua aircraft all freshly painted in Finnish markings, ready to sail to Finland's aid. Fortunately, the expedition was cancelled, or there would have been one more disastrous operation to add to Britain's war record.' Has anyone ever heard this story before?"

Tom Young, SAFCH #56), PO Box 159, Olema, CA 94950, USA.

"SAFO No.66 was as interesting as always, especially the items on East European markings. Regarding the item on the OV-1 Mohawk; the sale to Argentina is not the first overseas sale as Israel has had either two or four aircraft of this type for some years.

"There was an article on the Fokker F VII series in Air Enthusiast 12, April-July 1980. This included a cut-away, production list, and color profiles, but no three-views or drawings showing the differences between variants. The top of the fuselage appears to have a slight kink to it, rather than being either a curve or a straight line. It slopes down from the wing trailing edge in a straight line, then flattens out and runs back to the tail, also in a straight line. The kink being about a quarter or a third of the way back, although the profiles seem to place it further

aft. Wing span also varied: the F VIIa-3m had the original wing of 19.3 m; while the F VIIb-3m had the long span wing of 21.7 m. Early aircraft were simply referred to as the F VII-3m without any indication of what type of wing was fitted. The designation F VIIa referred to the original, single-engined model. The engine nacelles did vary. The partwork 'Airplane - The Complete Aviation Encyclopedia', 1990 onward, has a brief mention in part 102, and will probably have a full article on such a major type sooner or later. Parts of this are reprints from 'The Illustrated Encyclopedia of Aircraft', 1981 onward. Both are published weekly by Orbis in Britain.

"I told you before about a new British magazine called 'Exclusively Aircraft'. However, I have not seen any issues after No.4, December 1992, which was the first to reach NZ, so I do not know if it is still being published or not.

"The British magazine 'Scale Models International', May and June 1993 has a superb, two-part article on the Croatian Air Force of WWII. This includes history, photos, and color profiles.

"The four AESL (Aero Engine Services Limited) Airtourer T6/24 trainers which were retired from the RNZAF last year, were sold early in 1993 and two remained in NZ while two went to Australia.

Their new identities are:

Serial	c/n	New Civil Identity
NZ1760	542	ZK-JBX, temporary only; went to Australia as VH-AMX
NZ1761	546	ZK-LDG, privately owned, by Lew Wellington, Don Yates, and Gavin Rawson: initials LDG
NZ1762	552	ZK-JBZ, Bay of Islands Aero Club
NZ1763	553	ZK-JAX, temporary only; went to Australia as VH-MUM

"Both 'New Zealand Military Aircraft and Serial Numbers' by C.F.L. Jenks, and 'NZPAF & RNZAF Aircraft Colour Schemes', Volume 1 by Warren P. Russell list the construction numbers of these aircraft as having a B-prefix, but in the civil registration listing in 'New Zealand Wings' and 'Australian Aviation' they have an A-prefix, such as B542 or A546.

"On 7 April 1993, at approximately 1330 hours, RNZN Wasp HAS.1 NZ3901 ditched in the sea. The Leander-class frigate, HMNZS Canterbury, and the tanker Endeavour were leaving Auckland at the start of a six-month, round-the-world tour that included attending the 50th Anniversary of the Battle of the Atlantic commemorations in Britain. As they departed, the two ships were accompanied by other Royal New Zealand Navy vessels. Wasp NZ3901, flying from the Canterbury, came down in the sea from a height of about 30 meters, and about 100 meters from the ship near Channel Island, off Coromandel on the Coromandel Peninsula in the outer Hauraki Gulf. Neither the pilot or his passenger were hurt. The helicopter was kept afloat by its flotation gear, and it was later winched aboard the frigate HMNZS Waikato. The Canterbury and the other ships then returned to the Devonport Naval Base, except for HMNZS Endeavour, which continued on her way. The Wasp was taken by road to Hobsonville for inspection. Since the cause of the accident was not known, normal flying (but not emergency or operational flying) was halted for two days following the ditching, but the Wasps were not grounded. HMNZS Canterbury resumed her journey the following day after embarking a replacement Wasp NZ3905. I have not yet heard if NZ3901 is to be repaired or scrapped.

"The seven ex-RNZAF Strikemasters retired last year and handed over to Aermacchi as part of the MB339CB purchase deal have been put up for sale.

The aircraft being NZ6361-64 and NZ6370-72. Airframe hours range from 4584 to 5641. All are complete and in flyable condition, and are currently in storage at Ohakea, their former home. Of the other nine, NZ6367-69 have crashed; NZ6373 went to the RNZAF Museum at Wigram: while the other five are to be used as Instructional Airframes.

"The RNZAF Museum has acquired an ex-RAF English Electric/BAC Canberra B(I).8. This arrived in NZ in April 1993, aboard a container ship. Formerly WT346, the aircraft is to be repainted as one of the 11 B(I).12 Canberra interdictioners used by the RNZAF from 1959 to 1970. The B(I).12 differed from the B(I).8 mainly in having an ejection seat for the navigator. Of the 11 used by NZ, two crashed; one was sold back to BAC, and eight (plus two T.13 trainers) went to India in 1970. Although the RNZAF Museum already has a Canberra, this is an Australian-built B.20 with a full-width canopy, rather than an Indictor, which had a single fighter-style canopy off-set to port.

"The RNZAF detachment serving with the United Nations in Somalia (Operation Samaritan) returned home at the end of May 1993. Equipped with three Hawker Siddeley Andover C.1 transports from 42 Squadron, the Det spent four and a half months in Somalia based at Mogadishu. They left Mogadishu on 20 May, but approaching Amberley in Queensland, Australia, NZ7625 developed a problem with its generator and was left at Amberley until a replacement could be brought in, while NZ7627 and NZ7629 flew on to Whenuapai with the crew and passengers from '25. They arrived home on 28 May, with '25 following on 31 May. Supporting the return of the Andovers were a trio of Hercules from 40 Squadron, NZ7001, 02, and 03.

"The RNZAF C-130H Hercules fleet are getting new Honeywell auto-pilots to replace their old E-4 systems. This is called Project Athene, after a Greek goddess who helped Hercules in his labours. Work began on the first conversion at the RNZAF engineering base at Woodbourne in May 1993 and was scheduled for completion in July. After a 25-hour flight-test programme, the remaining four aircraft will be modified. The cost is \$4.3m NZ for all five aircraft.

"Another proposal currently being studied is a plan to fit new wings and tailplanes to the six P-3K Orions of 5 Squadron to extend their service lives as the present items are nearing the end of their fatigue lives. The engine nacelles would also be refurbished. If the go ahead is given for Project Kestrel, it would take four years to modify all six Orions; the work needing to be done by the turn of the century.

"In June 1993, the Central Flying School (including the Historic Flight, comprising a WW2 De Havilland Tiger Moth and a North American Harvard) and the Pilot Training Squadron, moved from RNZAF Base Wigram in the South Island, to RNZAF Base Ohakea in the North Island. The Flying Training Wing disbanded and the units came under the control of the Flying Wing at Ohakea. The Wing currently comprises 2, 14, and 75 Squadrons, although 2 Squadron is currently based at Nowra, in New South Wales, Australia. The Airtrainers are housed in the former 2 Squadron hangar. Following a final parade at Wigram, and various fly-pasts on 16th June 1993, the Historic Flight flew to Ohakea on 17 June. On 18 June, they were followed by 16 CT-4B Airtrainers (of the 18 remaining in service). The five Bell 47 Sioux helicopters used for basic helicopter training had

already gone to 3 Squadron at Hobsonville, Auckland, in May. Two of the four Iroquois helicopters of the 3 Squadron Detachment at Wigram have also gone north, leaving Wigram with just two Iroquois. "For the first time, Flying Training is now under the control of Operations Group rather than Support Group. All flying training to Wings standard will now be done by the PTS using the Airtrainers or Aermacchi MB339's shared with 14 Squadron. Future helicopter pilots will then go to Auckland, where they will do a course on the Sioux with 3 Squadron.

"On 21 July, a flight simulator for the Aermacchi MB339 was officially handed over to the RNZAF at Ohakea. It was built by Hughes Rediffusion in Britain.

"During July and August 1993, the RNZAF and NZ Army conducted exercises in Fiji for the first time since 1986 when military ties were broken off following the two military coups there.

"According to a report in the June 1993 issue of Australian Aviation magazine, the Australian Army is considering the purchase of up to 40 ex-US Army AH-1P Cobra helicopters. These would replace both the Kiowa observation helicopter and Iroquois gunship. This is still only at the idea stage, but it is interesting as the RAAF, who were then responsible for the bulk of Army support helicopter operations, once had 11 AH-1G Cobras on order for use in Vietnam. The order had been placed in December 1970, but was cancelled in October 1971 as part of a series of defence cuts. I think that this would have been the first export order for the type? The serial prefix block A16 was

allocated to the Cobra and was not re-used even though it was not taken up. If this does go ahead, will the aircraft use A16, or will they be allocated a new serial block."

Paul Adams, (SAFCH #773), 81 Ponsonby Road, Ponsonby, Auckland 1, New Zealand.

"Regarding my article on the PBV-5As in Paraguay: At the time I wrote the article, in October 1992, the best information I had about the fate of FAP2002 was that, according to Jorge Felix Nunez Padin, it was sold to the Argentine Naval Aviation Museum. This aircraft was not taken up by them and, instead, it was sold to an American living in Paraguay. A year after the article was written, FAP2002 is still at Asuncion International Airport and no one has been working on it."

Antonio Luis Sapienza (SAFCH # 1160), Casilla de Correo No.2721, Asuncion, Paraguay.

"I recently discovered your journal through the Midland Counties catalogue and was very impressed with what it has to offer. My own writing is more politically and strategically oriented, but doubtlessly can profit greatly from the remarkably detailed perspectives of your contributors."

Aaron Karp (SAFCH #1339), Department of Political Science and Geography, Old Dominion University, Norfolk, VA 23529-0088.

"The chapter on the Spanish RWD-9 and RWD-13 in Miranda-Mercado's book is very short and includes three photos. Two are of the RWD-13: one

of an aircraft (code 30-3), circa 1937, from the Grupo Morato in the air with a He-46. The other is of the same aircraft on the ground, also circa 1937. The third photo is the only one ever published of a RWD-9 in Spain; the aircraft is coded EM-W46 and the photo was taken in 1935 at an "open day", or so it seems because civilians are gathered around the plane.

"The text is as follows: 'This plane was the adaptation as a liaison a/c of the fabulous RWD-9, a plane of superior characteristics built for the 1934 Challenge International de Tourisme. The RWD-9 made a favorable impression in Madrid and Seville and, according to A. Glass, two planes, coded SP-DRA and SP-DRB were sold to the Spanish Aviacion Militar in 1935, one of them receiving the code EM-W46. This plane was destroyed in Limoux, France, on 31 October 1936. As for the RWD-13, up to 4 a/c were reportedly sold to the Nationalists in 1936 through SEPEWE. These were integrated into Group 30, coded 30-1 to 30-4 and used for liaison purposes. One of them was used by 6-G-15 and another by Garcia Morato while he was in Osorno in August 1937. 30-3 and 30-4 survived the war to be transferred to the Saragossa Aeroclub, from 1942 to 1948, being stricken off charge in Logrono in 1949 and 1950 respectively.'

"Then comes two pages of technical data and four pages of 1/72 scale drawings, plus a color profile drawings of EM-W46."

Juan Carlos Salgado (SAFCH #1311), Carretera de Bosende (Tolda) 36, 27169 Lugo, Spain.

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**CENTRAL AMERICAN AND CARIBBEAN AIR FORCES**, Daniel P. Hagedorn. Air-Britain Publication. Available from Air-Britain Sales Dept., 5 Bradley Rd., Upper Norwood, London SE19 3NT, UK. L 18.75. Hardbound.

The books and articles written by Dan Hagedorn on Latin American military aviation are well known for their accuracy and completeness. In this, his latest book, he covers the air arms of fifteen countries: Cuba, Nicaragua, Guatemala, Honduras, El Salvador, Dominican Republic, Panama, Costa Rica, Haiti, Netherlands West Indies, Jamaica, Barbados, Bahamas, Trinidad, and Belize. There are 162 pages and 292 photographs (64 in color). There is even a chapter of "Non-Traditional Air Force", a euphemism for mercenary air forces. (Mexico is purposely left out of this book, because the author believes that it deserves a book of its own.)

The political and military history of this volatile region is convoluted and confusing, but, given the available space, the author does as good a job as can be expected sorting out events. While presentation by country seems to be the only logical organization for a book of this kind, without an intimate knowledge of the geography and history of this region, the serious reader will have to shuffle back and forth between chapters to put things into correct historical perspective. This makes the book hard reading at times, but the resulting understanding will prove well worth the effort.

There is only one map and this is a of the Caribbean and locates each of the countries covered in the book. This reviewer, for one, would have appreciate more detailed maps of each country identifying the locations discussed in the text.

While the text challenges the mind, the illustrations

enchant the eye. The photographs cover the exotic and the familiar, from a Guatemalan Bleriot XI to a Honduran CASA C-101. The b&w photos are generally large and well reproduced. The color photos are also well reproduced, but, with 8 to a page, they are a bit small, and their selection is not always the best. I think I would have liked larger, but fewer photos that were more carefully selected. To give some feeling of the depth of coverage, let me list the photos in the 27-page chapter on Cuba. CAEC (Cuerpo de Aviacion Ejercito de Cuba): Vought QO-2, Vought UO-1, Consolidated PT-3, Curtiss Hawk II, Curtiss P-6S, Curtiss-Wright CW-19R, Waco S3HD-A, Beech AT-11, Republic F-47D, Stearman A73BI, North American at-6B, Lockheed B-34 (PV-1), Beech UC-45F, Beech 35 Bonanza, Vultee BT-13A, Beech S17D Staggerwing, Stinson Model 105, Lockheed F-5G, Curtiss C-46A, NA B-25J, Lockheed P-38L, Lockheed T-33A, Convair PB4Y-1, & Aeronca L-3B. Cuban Navy: Fokker Universal, Lockheed Sirius 8A, de Havilland DH-60 Moth, Howard DGA-15W, Convair OA-10 Catalina, & Grumman TBM-2S2. FAR (Fuerza Aera Revolucionaria): NA F-51D, NA T-28A, NA AT-6F, Bell 47, Mil Mi-4, MiG-17, MiG-23BN, An-26, Zlin Z-142, & Zlin Z-526. Color photos of Cuban a/c are: OV-10, C-47, Sea Fury FB.11, T-28, MiG-15UTI, MiG-19, & MiG-21.

Other countries receive similar coverage, although some of the smaller ones, e.g. Barbados, Bahamas, Trinidad and Tobago, and Belize, receive only one page and one photo.

Art work is restricted to the covers: a color side-view drawings of a Dominican Republic F-47 on the front and 21 representative (but not all inclusive) national insignia in color on the back. Illustration of all national markings, even if only in line draw-

ings, would have been greatly appreciated.

I've always thought I knew something about Latin American history, but this book showed me that my knowledge was only superficial. I now know a lot more, but much hard work remains before I can integrate all facts into a coherent history of the region. On the aviation side, this books presented me with many surprises - whole fleets of aircraft, both old and new that I didn't know were operated by Central American countries. e.g. Guatemala Potez 25, El Salvador Caproni AP.1, Dominican Republic (its nice not to see it called "Dominica" in a British publication) Vought O2U-1. Also, surprising were some of the early national insignia, e.g. Cuban US-style star, Nicaragua triangles, and Costa Rica US-style star. On the modeling front, I was surprised by the number of countries that used various marks of Lockheed Lightnings. I never bought kits of the Lightning when they were reasonably priced because I didn't think they were used by any small air forces.

This book should challenge and enchant all but the most jaded aviation enthusiast. The review copy has been graciously provided by Air Britain (via WWI AERO) who should be complemented for taking a chance on such an exotic subject.

**SERIES AERONAVAL**, edited by Jorge F. Nunez Padin, is dedicated to the history of the aircraft of Argentine Naval Aviation. Current plans are for a total of 36 titles, each one with 28/32 pages including photos and drawings of color schemes. **SERIES NAVAL** started with a print run of 1000 of each title, but because of a growing demand, this number was doubled beginning with monograph #5. **SERIES AERONAVAL** is the only publication of its kind in Argentine and probably in entire Latin



America.

"The Skyhawk volume will be reprinted by late September 1993, and a reprinting of the volume on the Panther/Cougar is planned for the first half of 1994.

"The 1993 editorial program includes these titles: #1 McDonnell Douglas A-4Q Skyhawk, #2 Grumman F9F Panther/Cougar, #3 Grumman S2F Tracker, #4 Sikorsky SH-3D, #5 Super Etendard, #6 SA-316B Alouette III and the reprinting of #1. Titles to be published during 1994 will be: #7 Lockheed P2V Neptune, #8 Douglas C-47 Skytrain, #9 AerMacchi/Embraer EMB-326GB Xavante, #10 Martin 139WAN, #11 North American T-28 Fennec, and #12 Vought F4U Corsair.

"The editor of SERIES AERONAVAL is working to launch two other series of booklets. The first will be similar to SERIES AERONAVAL but dedicated to Argentine Army/AF aircraft. Tentatively scheduled to be launched during the second quarter of 1994, titles under preparation are: Avro Lancaster/Lincoln, Curtiss 75-O, IA-24 Calquin, and North American F-86F Sabre. A second series will follow the Aerofax Minigraph format and the first title will be the Argentine Skyhawks in Detail (covering A-4P/O/C)."

Jorge Felix Nunez Padin (SAFCH #395), C.C.117 Suc.12B, 1412 Capital Federal, Argentina.

Series Aeronaval #3: **GRUMMAN S2F TRACKER**, Jorge F. Nunez Padin. Museo de la Aviation Naval. Available from Jorge F. Nunez Padin, C.C.117 Suc.12B, 1412 Capital Federal, Argentina. This small (15.5 cm by 22.5 cm), 32 page, monograph is a treasure chest of information on Argentine Trackers. The Spanish-language text is divided into five chapters: (1) Historia, (2) Operaciones en Malvinas, (3) Tecnica, (4) Identificacion & Historias Individuales, and (5) Colores & Insignias. Even if you have trouble translating these chapter headings, you'll find this booklet valuable for its photos and drawings. These include 16 b&w photos, 7 color photos (one of a S2F in peculiar upper surface camouflage in two tones of brown), 4 side-view drawings [two in the USN scheme of light grey and white, and two in 'low-vis' scheme of medium grey (FS26176) and light grey (FS26307)]. Also included are 2 side-view diagrams showing the antennae fit for the US-2A and S-2E. Rounding things out are 3 unit insignia in color.

Series Aeronaval #4: **SIKORSKY SH-3D SEA KING**, Jorge F. Nunez Padin. Museo de la Aviation Naval. Available from Jorge F. Nunez Padin, C.C.117 Suc.12B, 1412 Capital Federal, Argentina. Identical in format, including the chapter headings, with the Tracker monograph reviewed above. There are 19 b&w photos, 6 color photos, 3 side-view drawings, and color photos of 3 unit insignia. Color schemes illustrated include a white and light grey a/c with red crosses, a 'low-vis' machine in overall dark grey (FS26176), and a machine camouflaged in dark green (FS34084) and green (FS34130) with light grey (FS36440) undersurface.

#### KUWAIT AIR FORCE.

This small booklet, 36 pages 14.5 cm by 21.5 cm, was sent to the SAFCH by Martin Bach (SAFCH #1275) who says they were being passed out free at the Kuwaiti tent at German air shows.

The booklet begins with a few pages of text providing a thumb-nail sketch of the history of the Kuwaiti AF. This is followed by 15 full-page color photos of Kuwaiti a/c: Jet Provost Mk3, Hawker Hunter, Lighting, Strike Master 167, Gazelle, Puma, Mirage

F-1 (in 'Free Kuwait' markings), Sky Hawk A4-KU (in 'Free Kuwait' markings), C-130 Hercules, DC-9, Super Puma, Hawk, Tucano (in Kuwaiti markings, but stored in the UK), F/A.18 Hornet, & MD-83. Each photo has a caption listing the "Total number of aircraft", "Beginning of service", and "End of service". A one-page table lists hours and missions flown each a/c type in Desert Shield (both preparation & operation) and Desert Storm (both support mission & operation). For example, during Desert Storm, the Kuwaiti Sky Hawks flew 621 operation missions, the Mirages 128 missions, and the Gazelles 100 missions. The front cover has a color photo of Kuwaiti A-4, Mirage, and F-18 in flight over the capital city, and the back cover has 6 unit insignia in color.

This booklet is printed on a high-glass paper so the reproduction of the color photos is excellent, except for a few of the early a/c where the original print must have been poor.

Mi-24, Jiri Basny, Jiri Brazda, Michal Ovcacik, & Karel Susa. 4+ Publications, PO Box 27, 198 00 Praha 90, Check Republic. [Available from: Four Plus UK, 29 Westwood Gdns, Hadleigh, Benfleet, Essex SS7 2SH UK or 4+ Publication NA, 855 Bebout Rd., Venetia. PA 15367. USA.]

The format of this latest 4+ publication follows exactly the successful format of their previous releases: full English translation; outstanding scale drawings detailing all variants and external stores, informative sketches of interior detail, excellent drawings of representative color schemes and markings, color photos of representative aircraft, and page after page of color and b&w photos of exterior and interior detail.

As with the earlier 4+ publications, the quest for accuracy limits the coverage to machines available to the author, i.e. those in the Czech Air Force. Of the 18 color photos of the full a/c, 9 are of Czech machines, 5 of Soviet, and the others are one each of Iraq, Germany, Poland, and Hungary (new markings). The scale drawings occupy 4 pages, and the color-scheme drawings are provided for 4 Czech machines. A full page is devoted to scale drawings of external stores.

There are 16 pages of color photos with from 6 to 10 photos per page; almost all of these are of external and interior details. A similar number of b&w photos continue the coverage of details.

Technically, this book is superb. The high-grade, glossy paper allows the photos to be reproduced to the highest quality and highest fidelity of color. This book is ideal for anyone attempting to super-detail a model of the Mi-24 in any of its variants; it is useful for anyone interested the Czech Mi-24; but it would be of little use to anyone interested in the Mi-24 in the markings of countries other than Czechoslovakia.

**MARINE MUSCLE: HORNET AND HARRIER**, Hans Halberstadt. Wings #5; Speciality Press, 123 North Second Street, Stillwater, MN 55082, USA. \$17.95. Add \$3.95 for shipping from publisher.

This book is done in the usual 'Wings' format: Softbound, 96 pages 7.5 in. by 10 in. with 90 color photos. There is a short text; the major of text on the F-18 describes the author's flight in a 2-seat D model, while that on the Harrier describes a simulated attack supporting a marine beach-head. However, the heart of this book, as it is for all previous books in the 'Wings' series, is the photos. A few of these are of the full aircraft, but most are of exterior and interior detail. The high-quality, glossy paper allows excellent reproduction of these color photos.

An indispensable book if you want to model either a Marine Hornet or Harrier.

**'RHINO' THE IMMORTAL PHANTOM II**, Joe Cupido. Wings #6; Speciality Press, 123 North Second Street, Stillwater, MN 55082, USA. \$17.95. Add \$3.95 for shipping from publisher.

At first glance, this book appears to be another clone in the 'Wings' series - softbound, 96 pages 7.5 in. by 10 in., 100 color photos. A closer look, however, reveals important, but subtle, differences. Almost all the photos are of entire aircraft (only one 'walk around' here) and there is no text! As a reader who enjoys looking at beautiful machines, this is much more pleasing than page after page of 'guts'.

The lack of a formal text is another plus for this book. It has been replaced by extensive captions (some nearly a half-page in length) that describe the history of the aircraft in the photo and that of the unit operating the aircraft. The book is divided into four unequal parts: (1) 'Brown Shoe; Phantom IIs, (2) Silver Wings, (3) ANG and AFRES, and (4) Close Up. The third section is about twice as long as the other three sections combined.

This is not the kind of book you read in one setting and then put away. You find yourself leaving this book by your easy chair so that you can read a few pages at a time during your infrequent 'relaxation' breaks. I found this book refreshing change for the usual 'Wings' format. If you like the Phantom, I think you'll love this book.

"William Bartsch who wrote 'Doomed at the Start' the story of USAAF pursuit units in the Philippines is writing a sequel dealing with the USAAF in the ABDA. Have you read 'Doomed at the Start'? It has my vote for aviation book of the year." Fred Charlton (SAFCH #928), 1410 Grant St., Bellingham, WA 98225, USA.

"Quiron Ediciones have recently published a new book, #3 in their LA MAQUINA Y LA HISTORIA series. Written by the well-known Spanish aviation historian Juan Arraez Cerda, 'Los Cazadores de la Legion Condor' consists of 144 pages including 3 pages of color profiles (He 51, Bf 109, He 112, & Ar 68), and two double-page profiles illustrating Bf 109Es and He 51s, plus a double-page upper-view drawing of He 51s. Two pages of profile drawings (Bf 109, He 112, Ar 68), one page of 3-view drawings (Bf 109C-1), a double-page 5-view drawing (Bf 109E-3), and a double-page 6-view drawing (He 51). There are also 2 color pages of group emblems. There are about 140 b&w photos, more than 90% of a/c and most of them never before published. There is a full account of the activities of the Legion's groups in four sections, each corresponding to a different a/c type (He 51, Bf 109, He 112, & Ar 68). The text is complemented with full lists of J.88's flight personnel (name by name), casualties (date, place, cause of death), official kills (pilot's rank & name, date, unit), staffel commanders, a/c losses (type, date, pilot, place, cause), alphabetical lists of names and places and a 3-page bibliography. As a bonus, three photos of preserved Bf 109s (6-88 and 6-106) are included. All photos have English captions.

"A new book by Arraez Cerda, 'Los Cazadores de la Aviacion Republicana', is announced inside the cover sleeves. I'll send comments as soon as I get it."

Juan Carlos Salgado (SAFCH #1311), Carretera de Bosende (Tolda) 36, 27169 Lugo, Spain.



"I recently received the first issue of a new Bulgarian magazine that you may want to mention in SAFO. The first issue is a rather slim thing with not much of small-air-force interest (although the Bulgarian D-520 illustrations are interesting), but the very fact of an aviation magazine being produced in Bulgaria under the current conditions is extremely praiseworthy and well worth the support of SAFCH members. The second issue will deal with the Bulgarian KB-11 Fazan. I've no idea of prices for subscription, etc., but anyone interested should write to: Marii Chernev, Cristo Beltchev 30, Sofia 1000, Bulgaria."

John MacGregor (SAFCH #766), 13 Foggyley Gardens/#21, Dundee DD2 3L9 Scotland.

[Editor's note: The issue John sent is marked 1/93 and carries on its cover the words "ACO" for "Aviation Carriers Operations" in both English and Bulgarian. This can't be the title of the publication, but I find no other identification.

The first issue consists of 10 pages (20 cm by 28 cm) with glossy covers in color. The contents consists of two articles: (1) "Dewoitine D 520" with 6 pages, 8 photos (one of aircraft in Bulgarian markings), 5 color side-view drawings (one Bulgarian), and a small 3-view drawing. (2) "Essex CV-9" 12 pages with 18 photos, 4 color side-view drawings of USN carrier aircraft, and a full-page painting of a Japanese "Gekko" making a Kamikazi attack on the USS Bunker Hill. The color side-view drawings are outstanding, the reproduction of the photos is acceptable, and the text is in Bulgarian.

While this contents is probably welcome inside Bulgaria, there is not much to excite international attention (if you want to learn about Bulgarian D-520s, you're better off with AVIONS #6). However, if future issues cover Bulgarian aircraft with the same variety of photos and beautiful color drawings, this could turn out to be a gem. If only it had a name.]

MODELO TERAPIA, Ano 1, No 1, Agosto 1993.

Our good friend, Antonio Sapienza, sent the first issue of the IPMS-Paraguay's new magazine. It's a slim issue with only 4 pages (22 cm by 33 cm), but it's an encouraging start. The content consists of two articles: "El Beech C-45 en Paraguay" with a page of text and 3 side-view drawings (one Aram Aerea and 2 civil aircraft). "El Ilyushin Il-2/10 Sturmovik" one page of text with a side-view drawings. Anyone interested in supporting this effort should write to IPMS-Paraguay, Casilla de Correo 1900, Asuncion, Paraguay.

PLIENO SPARNAI, 1/93. Lithuanian Technical Museum, Veiveriu 132, Kaunas 3010, Lithuania.

Who would have imagined, a few years back, that, by 1993, we would have a magazine devoted to Lithuanian aviation - and printed in Lithuania. The

first issue of just such a magazine was sent to me by David Dulaitis (SAFCH #913) who picked it up on a visit to the 'old sod'.

While the photo reproduction is barely acceptable, the choice of subject matter is exciting and there are interesting color drawings. The partial contents of this first issue are: "The First Aircraft of the Lithuanian Air Force 1919-1923" 6 pages including 5 photos (Rumpler C.1, Sopwith 1-1/2 Strutter, Albatros C.1b, Halberstadt CL.IV, & Albatros C.XV) and color 3-view drawing of a LVG C.VI (all with the Lithuania Knight insignia used until 17 Nov. 1920 and featured on a Blue Rider decal). "The First Squadron Lithuanian Air Force" 8 pages with 9 photos (LVG C.VI, LVG C.V, Letov S-20L, Fiat CR.20, & Dewoitine D.501). "The Anbo-VIII" 6 pages including 36 newsreel 'stills', color cover painting, and color scale 3-view drawing with cross sections. "In Lithuanian Air Force Service: Memoirs of a Military Flyer 1936-1940" 14 pages including 18 photos (Anbo-41, Anbo-III, Anbo-51, Anbo-III collision with National Guard Piper Cub, Anbo-41, & Lockheed Vega 'Lituanica II' being transported to a Soviet bombing range for use as a target). "Yak-50 in Lithuania" 4 pages including 4 color photos and 1/60-scale, 4-view drawing.

This first issue included a 2-page English translation which provides photo captions and short summaries of all the articles. This magazine is a must for anyone seriously interest in pre-WWII Baltic aviation.

AIR ACTION, English-language edition premiere issue, Summer 93. Blue Star Publishing Co., PO Box 6361, McLean, VA 22106, USA. Subscriptions: \$35 for 6 issue per year, or \$45 outside the USA.

Although acknowledged for its high-quality photo reproduction and appreciated for its coverage of modern small air force, because of the language barrier, AIR ACTION has never received the popularity in North America that it deserves - until now. If I understand correctly, this "premiere" English-language issue is a trail to test the market, with regular publication to begin in December 1993.

The issue at hand is typical of its French-language parent with major articles on: "The Storks have Flown" 14 pages including 33 color photos of Su-27s of the Russian 159th Fighter Regiment leaving Poland after over 40 years. "Adeus Gina" 9 pages including 26 color photos of the last Portuguese Fiat G-91s. "Los Dragones de Comalapa" 8 pages including 24 color photos of El Salvadoran A-37. (Don't let the titles fool you; the text is all in English.) "Mirage F1CZ versus MiG-21MF" 4 pages on South African AF combat with Angolan MiGs including a nice color drawing of a Mirage close on the tail of an Angolan MiG. (Good color information on the SAAF Mirage, but no informa-

tion on the markings of Angolan MiG.) News items include: "Greece: Ex-US Navy A-7Es to beef up current A-7H fleet" with two photos. "Czech Republic: air force receives first of 15 new L-39MSs" with one photo. "Slovakia" details Slovakia's share of the ex-Czechoslovak AF and includes color photos of Su-25K and Let L-410 in new Slovak markings.

If great color photos of modern small air force aircraft turn on your modeling juices, but you still want a readable and informative text, this just could be the magazine for you. Review copy provided by Jean-Michel Guhl (SAFCH #1340)

PLASTIC KITS REVUE, ul. 1.maje 11, 709 00 Ostrava-Marianske Hory, Czech Republic.

A new member from the Czech Republic, Tomas Polak (SAFCH #1338), sent issues #16 and #17 in exchange for his subscription. This magazine is in its third year of publication (12 issues per year?) and its so good that I don't know how I missed it for so long. Its thick (76 pages per issue), includes lots of color and drawings (12 pages), and, most important, historical aspects are covered with long, apparently comprehensive, articles - something you would not expect from the title. There is neither room nor necessity to cover all the articles in both of these issues, so here is a summary of the color coverage.

#16: Color side-view drawings: Swiss (EKW C-35, MS D.3800, & Bf 109E-3) and Luftwaffe (He 111 & Bf 110) shot down by the Swiss; Battle of Britain Hurricanes(4) and Bf 109s(4); Ki-10 Perry and 3 Ki-27 of 64, Senti; 4 a/c flown by Douglas Bader; Belgium Fiat CR.42; Kfir (USN, USMC, 2 Israeli, & 2 Ecuadorian); Israeli Lavi, Bahrain F-16 & USAF F-16). Color photos: Swiss Hawk; Israeli Museum Gazelle, Seabee, Firebee, Mirage IIICJ, Kfir C-1 and C-2.

#17: Color side-view drawings: Swiss (EKW C-35, MS D.3801, Bf 109D, 109E, & 109G); 2 Ki-27 and Ki-43 of 64. Senti; Luftwaffe & Czech Me 108 Taifun; Italian MC.202, MC.200, & CR.42 and RSI BF 109G & MC.205V; rocket-carrying Luftwaffe a/c (Bf 110G, Bf 109G, FW 190A, & Me 410A); RAF during Malayan Emergency (Pioneer, Mosquito PR.34, Spitfire PR.19, Hornet, Tempest, & Brigand); 3 Emily; and Soviet a/c used in the Invasion of Czechoslovakia in 1968 (MiG-15UTI, Il-28, MiG-17, Jak-27RT, MiG-21F-13, & MiG-21MF). Color 4-view drawings of Curtiss XP-55 Ascender. Color photos: Swiss Mirages; Malaysian Twin Pioneer; Czech MiG-23 with Eagle nose.

The text is all in Czech, but the photos are captioned in English. This magazine contains the best combination of modeling and history I've seen - too bad history in written in Czech.

## -accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-

"I am sending you some paints for Swedish Air Force colors that I have had produced by Xtracolor. Please make these available to SAFO readers. OlivGrun (328), MorkBla (438), and BlaGra (058) are the colors used on the J35 Draken, Sk50 Safir, Sk51 Bulldog, J32 Lansen, and the Sk60 SAB 105. Bla-

Gra (058) was the standard undersurface color on most Swedish a/c since 1940. OlivGrun (328) is also used on Swedish Hercules. MorkGron (325) was used on most Swedish a/c between 1935 and 1980. "Only 100 tins of each color were produced so this is more or less the last of these colors until I order

more. These color are mixed to match the original colors, so they'll need some white to achieve the proper 'scale effect'."

Jens Lindell (SAFCH #1341), Hobby-Importen, Box 3131, S-600 03 Norrköping, Sweden.



[Editor's note: After-market decals come in all shapes and sizes. Some provide all the markings necessary to finish one aircraft, some provide national insignia (and, sometimes, stencilling) for one aircraft and a choice of markings for a number of different aircraft of the same type; and others provide individual markings and require the purchase of a separate sheet for the national insignia. The three decal lines reviewed below illustrate this range of approaches.]

**Hi-Decal Line:** HDL, ul. Kilinskiego 22, 40-062 Katowice, Poland. Sole US Distributor: Military Model Distributors, 1115 Crowley Dr., Carrollton, TX 75011-5010, USA. Sole UK Distributor: Hannants Ltd., Trafalgar House, 39-31 Trafalgar Street, Lowestoft, Suffolk, NR32 3AT England. Review copies provided by HDL.

The HDL products have been reviewed in this column by our Polish members several times in the past, but these are the first I have seen in the "flesh". These decals are outstanding, even better than I had expected. These decal sheets are 9 cm and 13 cm and provide markings for from 4 to 6 aircraft. The sheets are crammed full of national insignia, serial numbers, unit emblems, individual markings, and seeds of stencilling. The registration is perfect, the printing sharp (the smallest stencilling is readable), and the colors are accurate. The instruction sheets are large (both sides of a 12 in. by 17 in. sheet) and comprehensive. Each a/c is shown in four views (port, starboard, top, & bottom) with separate drawings showing the correct external stores for each a/c and the placement on the stencilling. Finally, colors are identified by FS595 numbers, as well as by Humbrol and Model Master paint numbers.

These are excellent decals and the choice of subjects is a small-air-force enthusiast dream. Squadron is asking on \$4.50 for these - a real bargain.

**MI6-23 Flogger B/E/G/K, 1/72-scale decals, 72-015.**

This sheet covers 5 camouflaged a/c: Soviet Flogger K, Polish Flogger B, German (ex-East German) Flogger B, Israeli (ex-Syrian) Flogger G, and Iraqi Flogger E.

**MiG-27/-23BN Flogger J/H, 1/72-scale decals, 72-017.**

This sheet covers 5 camouflaged a/c: Soviet Flogger J, Iraqi Flogger H (carrying Exocet missiles), Czech and Slovak Flogger H, Indian Flogger J, and East German Flogger H.

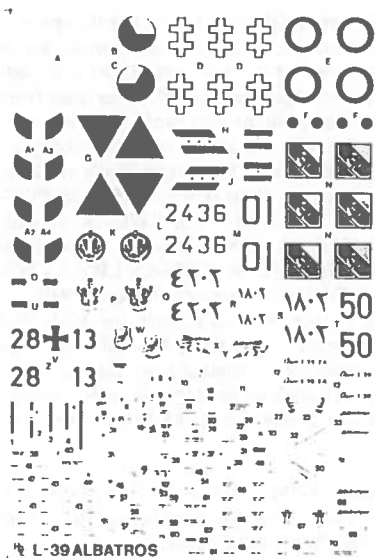
**Aero L-29C/ZO/ZA/MA Albatros, 1/72-scale dec-**  
**als, 72-019.**

This sheet covers 6 camouflaged a/c: Czech and Slovak L-39ZA, Iraqi L-39ZO, East German L-39ZO, Egyptian L-39MS, Lithuanian L-39C, and German F-39ZO.

**F-16C Viper, 1/72-scale decals, 72-021, Hi-Decal Line.**

This sheet covers 4 camouflaged F-16C: USAF during Desert Storm, USAF with experimental desert camouflage during Desert Storm, Israeli Falcon of "Valley" Squadron, and Israeli Falcon of Scorpion Squadron.

**InScale 72:** Makvlankatu 5 B 10, 0050 Helsinki, Finland. Review copies provided by InScale 72. Our friend and fellow SAFCH member, Pentti Manninen, continues to come out with excellent decals for WWII Finnish aircraft. These latest releases are every bit as good as the earlier releases which were previously reviewed in column. Suffice



it to say that InScale decals are in perfect register, sharply printed, and accurate in color. The instructions sheets are excellent and complete, with drawings of the camouflage schemes of all the a/c covered by the decals.

**BI-109 G-2 & G-6, 1/48-scale decals, AC010. \$9.00**  
This 15 cm by 21 cm sheet gives you serial numbers for 12 Finnish 109s with 3 sets of national insignia (dark blue swastikas on white, dark blue swastikas on light blue, and blue/white roundels), colorful a/c numbers, unit insignia (bat and crow), shark-mouth, and stencilling in the Finnish language. There are not enough national insignia to build all of these, but it should be possible to build 3 without resorting the other sheets for the national insignia (but only enough stencilling for one machine).

**Ju-88 A-4 & Do 17Z, 1/48-scale decals, AC011. \$9.00.**

Another 15 cm by 21 cm sheet with serial number for 8 Ju-88 and 8 Do-17, 3 sets of national insignia (dark blue swastika on white, dark blue swastika on light blue, and blue/white roundels), tail numbers for 8 a/c, squadron insignia (laughing face, bison, ace of spades, and elk, and stenciling for one machine.

**Dornier Do 17Z, 1/72-scale decals, AC012. \$5.00.** This small sheet, 8 cm by 10 cm, covers the same Do-17Zs as the 1/48-scale sheet described above: 10 serial numbers, 3 sets of national markings, bison, ace of spades, and elk insignia, and stenciling. You should be able to completely mark (except of stenciling) 3 Do-17Zs with this one sheet.

I-16, UTI-4, Lagg-3, & I-15bis, 1/72-scale decals, AC013. \$5.00.

The small sheet, 10 cm by 6.5 cm, provides serial numbers for 4 LaGG-1, 3 I-16, one UTI-16, 7 I-15bis, national insignia for 4 a/c, and one pair of red-cross markings. If you're willing to do some extra work, any of the LaGG-3 kits around should make into a nice looking model. However, we are still waiting for an accurate I-16 (don't waste these decals on the Revell kit), and the only I-15bis I know of is the Aeromodel vacuform. In summary, an excellent decal sheet in search of some decent kits. **Bristol Blenheim MkI & MkIV and Avro Anson MkI, 1/72-scale decals, AC014. \$6.00.**

This 10 cm by 14.5 cm sheet provides serial numbers for 10 Blenheims and 2 Ansons, 4 sets of national insignia (dark blue swastikas on white, dark blue swastikas on light blue, white out-lined swastikas, and blue/white roundels, one a/c number, several unit insignia (beaver, elk, red devil, ace

of hearts, ace of diamonds, etc., and a little bit of stencilling. You should be able to build a Blenheim MkI and MkIV and an Anson from this sheet and have enough left over for another Blenheim of your choice. Now, lets see, I know where I stored my Frog Blenheim MkI and the Airfix Anson, but where did I put that Airfix Blenheim MkIV, no matter. Airfix has re-released this kit.

**Dutch Decals**, Luc H. Boerman, Kerkstraat 2, 2471 AP Zwammerdam, The Netherlands. Review copies provided by Dutch Decals.

Here are another set of decals on a small-air-force subject and made by a SAFCH member. These sheets, all 21 cm by 14.5 cm, are all off excellent quality; perfect registration, lots of color, and stenciling, exotic subjects, but a mishmash of periods and schemes.

T-33A, Curtiss Hawk 75, B-25 Mitchell, P-51D, Spitfire LF Mk.IXc, F-4F Phantom; 1/48-scale decals. 48009. Dutch Decals.

This sheet covers 7 a/c: (1) A Curtiss 75A-7 Hawk in the NEI 1941 with orange triangles; (2) a B-25J in the NEI 1947 with Dutch tri-sectored "roundel"; (3) P-51 D in NEI 1947 with Dutch flag insignia; (4) T-33A RNethAF "Skys Shark" Team (with shark mouth); (5) Spitfire IXc RNethAF 1951 (overall aluminum with shark mouth); (6) Spitfire IXc NEI 1948 jungle green & light grey over light blue; and (7) F-4F a/c "captured by Dutch groundcrew and painted as a Dutch Phantom. The Germans were not amused." The sheet provides codes, squadron insignia, shark mouths, orange triangles, and Dutch flags, but you'll have to steal the "roundels" from sheet 48010.

**F-84F Thunderstreak & RF-84F Thunderflash;**  
1/48-scale decals. 48010. Dutch Decals.

This sheet provides markings for 4 F-84F (one aluminum) and one RF-84F. The sheet includes codes, squadron insignia, extensive stencilling, and 8 national insignia.

**F-84E/G Thunderjet, Spitfire LF IXc, & Piper L-4;**  
1/72-scale decals. 72022, Dutch Decals.

This sheet covers 7 straight-wing F-84E/G, 2 Spitfires IXc, and a Piper L-4 Cub. Five of the F-84 are natural metal and aluminum dope, but with colorful nose decorations, tip-tank flashes, and striped rudders. The sixth is a target tug with yellow and black bands. The Spitfires include one overall aluminium and one in NEI camouflage. Codes and decorations are provided, but not national insignia. The Cub is from the NEI 1947 in olive drab and neutral grey with Dutch flag insignia (provided).

**Orange Triangles Part 1: Jungmann, Curtiss Hawk 75, Boston DB-7, Douglas 8A, Dornier-24K, FW-58 Weihe, Fokker T-V, Fokker D-VII, & Hurricane IIB; 1/72-scale decals, 72023, Dutch Decals.** This sheet consists almost entirely of black-edged orange triangles and rudders, with all the necessary codes. The a/c covered are listed in the title. The Northrop and the Fokker T-V can carry either the orange triangles provided or a tri-color "roundel" (not provided). The Fokker D-VII is welcome, but seems out of place with only codes "265" and small inscription "F.265 BMW.185" provided; the "roundels" have to be obtained from elsewhere. The Hurricane, described as "RNethAF 2 VIG/IV Kali Djati AB februari 1942 NEI", is rather simply marked with orange triangles and serial Z???? (not included); the instructions acknowledge that "Photographs of these aircraft are very rare. Information is welcome". This a great sheet that could keep you occupied many a long winter evening.

# SQUADRONS OF THE ISRAELI AIR FORCE 1948 - 1992

## Part V : Squadrons 140 - 201

John Hayles

### Flight School

Role: Primary/Basic Flying Training

Following the end of the War of Independence, and the return of peace, many of the highly experienced foreign volunteer aircrews went back to their own countries. In order to replace these losses and to continue the expansion of the air force, young Israelis needed to be trained to fly IDF/AF aircraft.

Accordingly, in early 1949, a Flight School was set up at Kfar Sirkin (Qastina), an ex-RAF base just east of Tel Aviv. (Reportedly designated '12 Flying School'). Initial equipment comprised Boeing-Stearman PT-17 Kaydets for primary flying training, and AT-6 Harvards for basic flying training. The first course of four pilots graduated on 15 March 1949.

In late 1949, the PT-17s were supplemented by a substantial number of Fokker S.11 Instructors. But this type didn't prove very popular, and most examples had been passed to the Light Transport Squadron by the middle of 1953. Small numbers of DHC-1 Chipmunks and Temco TE-1 Buckaroos were also evaluated in the early 1950s but proved unsuitable - mainly because of performance restrictions in the 'hot and high' climate of Israel.

In the 1950s pilot training consisted of up to 60 hours of primary flying on the PT-17 or S-11, followed by 160 hours of basic and advanced training on Harvards. Operational training was then conducted on the Spitfires (later Mustangs) of 105 sqn or on Mosquitos. For an increasing number of students, this was rounded off by a jet conversion course on the Meteor T.7 with 117 sqn. Twin engined and navigation training was carried out on the Anson and Consul.

The Sinai campaign saw these aircraft operate in very different capacity. The Flight School organized an operational Harvard squadron, (assigned the temporary identity 140 sqn), manned by flying instructors and ground crews and deployed to an emergency airfield at Sde Teyman. The Harvard unit first saw action in a dive bombing attack on Egyptian artillery on 31 October. However, two aircraft were shot down and a further two damaged by ground fire. Subsequently, the Harvards were engaged in rocket attacks on Egyptian truck and tank columns. In all the Harvards flew 24 combat missions and launched 320 rockets, before returning to regular training duties. Similarly, 147 sqn was temporarily formed to operate the Flight School's PT-17s in the utility/liaison role from an airfield at Ramleh. The PT-17s were soon replaced by Piper Super Cubs in late 1956.

The 1960s brought a much increased emphasis on the quality of the pilots graduated by the school, as part of IDF/AF commander Ezer Weizman's aim to create an air force of the 'best of the best'. One pilot course in 1960 ended with only one graduate receiving his wings - the rest being washed out.

From the middle of 1960, Fouga Magisters began to gradually replace the Harvard in the Basic/Advanced Training role. An initial batch of 3 French-built aircraft being followed by IAI built examples from 1962. The IAI version incorporated many detail design changes from the French version, including larger unpowered ailerons, and strengthened wings to allow provision for an extensive range of weapons.

In late 1962, a new training scheme was introduced. This saw the final retirement of the Harvard from Flight School use. The training sequence now comprised 25 hours of primary training on the Piper Super Cub, then 150 hours on the Fouga Magister, followed by a posting to the Advanced Flying Training School (AFTS) flying Meteors (and later Ouragans) for weapons training. One source states that some Ouragans were received direct from France as early as July 1962, although most aircraft probably came from 115 squadron in 1967.

A helicopter stream was introduced in 1965, with helicopter pilots being posted to the Second Helicopter Squadron after completing basic flying training on the Magister.

For the Six Day war, the Magisters were formed into two squadrons, manned largely by reservists. On the first day, 5th June, the Magisters flew numerous close support missions in support of advancing ground forces, most notably at the huge tank battle at Bir Lahfan in Northern Sinai. Four aircraft were lost to ground fire that day. On the 6th, the Magisters again attacked armour concentrations and supply columns in Sinai. On the 7th, the Magisters were redirected to the Jordanian front, attacking armour positions around Nablus. By the end of the war, at least 19 Magisters had been lost, and many more had received damage, during these hazardous low level missions. The AFTS Ouragans were assigned the temporary identity 140 squadron during the war.

Magister deliveries continued after the war, and increased the Flight School strength to the equivalent of three squadrons, with some 45 aircraft. During the 1960's the Flight School also received a substantial number of Magisters from the German Air Force as they were progressively retired. In 1972 the Flight School Cubs And Magisters relinquished any operational roles assigned to them, and thus took no part in the Yom Kippur War.

During the late 1960s and early 1970s, the Flight School operated a Magister Aerobatic Demonstration Team in the national colours of Israel : blue and white. Subsequently the team's aircraft reverted to the standard Flight School colours of white and red.

In 1980, a programme to update and extend the useful life of the Magister was launched by IAI. Modifications include improved systems reliability, easier maintenance and a completely redesigned cockpit layout. The updated aircraft is known as a Tsukit. The first Tsukit was delivered in 1981, and the 86th and last in November 1986.

The current cadet pilot training sequence commences with 15 hours of initial training on the Piper Super Cub, after which the cadets learning ability and aptitude for flying is evaluated. Those who pass at this stage progress on to 9 flights of basic training on the Tsukit. At this point, the cadet is streamed into fast jet, helicopter or transport courses.

Fast jet pilots continue training on the Tsukit and later graduate on to the A-4 Skyhawk for advanced flying and weapons training. Helicopter pilots transfer to the Bell 206 for an initial 10 flights to confirm that they have been streamed correctly. Eventually, attack helicopter pilots will go to the Defender squadron which also serves in the OCU role, and



transport helicopter pilots will go on to the Bell 212. (The Flight School now operates a number of 212s itself). Transport pilots initially transfer to the Dornier Do28s of the Light Transport Sqn, followed by the advanced training on the Beech Queen Air.

It should be noted that there are two Hatzirim airbases - Hatzirim North West, which houses the Flight School and has two runways, and South Hatzirim which is the F-4E base with three runways in a triangle.

("Piper Squadron") Primary Training aircraft used:-

Type	Qty	Service	Base	Badge	Serial Examples
PT-17 Kaydet	50?	Feb 49 - late 1956	Ramleh, Kfar Sirkin (Kastina)		22, 31, 34, 11, 06
DHC-1 Chipmunk	1	Early 50's	Kastina		3001
Temco TE-1A Duckaroo	5	Early 50's	"		
Fokker S.11 Instructor	41	Dec 49 - Mid 53	"		11, 05, 11
Piper PA18-150 Super Cub	20?	1956 - Present	Tel Nof, Hatzirim	67 71?	019, 096, 136, 138
Cessna 180 /T-41D	2/6 +	1979 - Present	Hatzirim		Ce180:63

("Tsukit Squadron") Basic/Advanced Training aircraft used:-

Type	Qty	Service	Base	Badge	Serial Examples
AT-6D Harvard	25	Jan 49 - 1962	Kastina, Sde Teyman, Hatzirim		1112
CH170 Magister	100+	7 July 1960 - 1966	Hatzirim	67/68	242, 236, 201, 203, 209, 207, 212, 222, 225, 283
IAI Tsukit	86	1981 - Present	"	67	050, 584, 557, 525, 569, 621, 607

("AFTS") Advanced/Weapons Training aircraft used:-

Type	Qty	Service	Base	Badge	Serial Examples
Hatzor T.7/F.8	7	1961 - 1967	Hatzirim		
Ouragan	15	1967 - Jan 73	"		
TA-4E/H/J	24	1972 - Present	"	69, 70	544, 720
A-4H	7	7 - Present	"	50	311, 313, 332

Helicopter Training aircraft used:-

Type	Qty	Service	Base	Badge	Serial Examples
Bell 206A	10?	1975 - Present	Hatzirim	67	123, 125, 126, 138, 139
Bell 212	10?	1990 - Present	"	67	

199 Squadron (No Nickname Known)

Role: Fighter

199 Squadron is thought to be the shadow designation for part of the force of Mystere IVAs deployed to Israel by the Armee de L'Air during the Suez Campaign. The majority of the aircraft from EC 2 deployed to Ramat David in October 1956, as 199 Squadron. The remaining aircraft assumed the designation 201 sqn. There have been several reports that these aircraft operated in Israeli markings during this period.

Aircraft used by 199 sqn include:-

Type	Qty	Service	Base	Badge	Serial Examples
Mystere IVA	18	Oct - Dec 1956	Ramat David		

200 Squadron (No Nickname Known)

Role: Fighter

200 Squadron is thought to be the shadow designation assigned to the Armee de L'Air F-84Fs of EC 1, deployed to Lod for the duration of the Suez Campaign.

Aircraft used by 200 Sqn include:-

Type	Qty	Service	Base	Badge	Serial Examples
F-84F	18	Oct - Dec 1956	Lod (Lydda)		

201 Squadron ('Ahat'/'One Squadron')

Role: Fighter-Bomber

It is thought that 201 Squadron originated as a shadow designation for the rest of the force of Mystere IVAs deployed to Israel by the Armee de L'Air during the Suez Campaign. The aircraft from EC 2 deployed to Ramat David in October 1956.

The first IDF/AF to operate the F-4E Phantom, 201 sqn, was reformed in September 1969. After a rapid initial workup, it became the Phantom OCU. During the period 1969-1975, a number of aircrews were cycled through the unit for type conversion, and then used to form the nucleus of new Phantom squadrons.

Despite this training activity, the unit remained fully operational, an attack being carried out on a SAM site near Abu Sueir in October 1969. As part of the psychological battle during the War Of Attrition, 201 sqn Phantoms laid sonic booms over Cairo the following November. Reference 37 indicates that the first Israeli Phantom kill on 11 November 1969 should also be attributed to 201 sqn, not 69 sqn as stated in Part I.

201 sqn was also the first unit to receive aircraft from the Kurnass 2000 update programme for the F-4E. The first example being handed back in April 1989. In early 1992 the squadron is believed to have moved south from Hatzor to Ramon.

Aircraft used by 201 sqn include:-

Type	Qty	Service	Base	Badge	Serial Examples
Mystere IVA	12	Oct - Dec 1956	Ramat David		
F-4E	22	5 Sept 69 - 1989	Hatzor	72, 73	124, 201, 613, 618
Kurnass 2000	22	9 Apr 89 - Present	Hatzor, Ramon	72, 73	584, 668, 678, 680

'O' Squadron ('RSS - Rotor And Sword Squadron')

Role: Medium Utility/Assault Transport, SAR, Adv Training

The Rotor And Sword Squadron (RSS) was created on 1 January 1958, by simply renaming the Helicopter Flight of 103 sqn (See Part I of this series). At the time, the unit operated only four ex-civil helicopters. The following month three civil Sikorsky S-58Bs were delivered, nearly doubling the units strength and adding much needed load carrying capability. Over the next two years a further 4 S-58Bs were received.

As the IDF/AFs sole helicopter squadron, RSS not only converted fixed wing pilots to fly helicopters, but also devised and developed from scratch the best tactics and operating techniques for military rotary wing operations. Combat assault, cargo transport, night flying and even evasive maneuvering were all tried and progressively refined.

On 17 May 1961 the IDF/AF pressed into service three Arkia Airlines Alouette IIs (two of which were written off in 1962), and in December 1962 the first of twenty four ex-West German Navy Sikorsky H-34Gs (CH-34A equivalent) arrived by



ship at Haifa. These latter examples being distinguished from the earlier S-58Bs by the exhaust outlet located on the left side - rather than under the nose.

From around September 1965, the primary helicopter training role was taken over by SHS (Second Helicopter Squadron), with RSS's Alouettes being transferred to the new unit.

The Six Day War saw a number of helicopter assault operations being performed by RSS. The first taking place on the night of 5/6 June, when 11 RSS S-58s ferried some 600 paratroopers behind Egyptian lines at Om Kattef in Sinai. The paratroopers almost wiping out the Egyptian divisional artillery at a critical moment in the ground war. On 7 June, 11 S-58s and four Super Frelons landed 150 paratroops at Sharm el Sheikh in the southern corner of Sinai. RSS S-58s were also involved in smaller scale heliborne operations on 9 June at Ras Suddar, and 10 June in capturing the southern Golan heights. Numerous casualty evacuation, transport and aircrew rescue missions were also flown, all without loss.

The old S-58s were now showing their age, and potential replacements in the shape of eleven Agusta-Bell AB.205s were first unloaded at Haifa in December 1967. As further batches of 205s, including American built 205A/UH-1D models, continued to arrive the S-58s were progressively phased out.

During the War of Attrition the 205s were intensively used for border patrols and casualty evacuation missions. The Yom Kippur war also saw the type undertake assault and general transport duties together with the rescue of downed aircrews. Three Bell 205s were lost to ground fire during the conflict.

February 1975 saw the arrival of the first Bell 212, destined to replace the Bell 205 in IDF/AF service. Similar to the US military UH-1N, the Bell 212 offered a 'hot and high' performance considerably better than its predecessor. Eleven of the Bell 205s were eventually passed to Rhodesia, while most of the remainder were withdrawn from service in the late 1970's as deliveries of the Bell 212 rapidly built up.

Following the splitting off of 'P' sqn in the early 1980s, the unit relocated to the northern base of Bezet(?), from its previous central bases of Tel Nof and Dov Hoss.

Two examples of the Bell 212 were lost to AAA fire in the Lebanon war of June 1982, with at least another two lost since then. Several of the 212s were dedicated to advanced helicopter pilot training, following on from the Bell 206 - these being recently transferred permanently to the Flight School strength.

Aircraft used by RSS include:-

Type	Qty	Service	Base	Badge	Serial Examples
SE3130 Alouette II	1	1 Jan 58 - Sept 65	Tel Nof (Ekron)		
Hiller 360	1	1 Jan 58 - 1959	"		
Sikorsky S-55	2	1 Jan 58 - 1961	"		01
Sikorsky S-58B	7	Feb 58 - 1969	"	74	
SE3130 Alouette II	3	17 May 61 - Sept 65	"		4X-BAA/06, BAB/08, BAC/09
Sikorsky H-34G	24	Dec 62 - 1969	"	74	131, 07, 11, 116
Agusta AB205	212	Dec 67 - 1982	?	74	014, 61, 17
Bell 205A	207	1968 - 1982	Dov Hoss?	74	107
Bell 212	58	Feb 75 - Present	Bezet	75	057, 051, 010, 012

'P' Squadron (No Nickname Known)

Role: Medium Utility/Assault Transport

During the early 1980s, a new unit split off from RSS to improve the SAR/helicopter transport coverage within Israel. The new squadron covered the southern half of Israel while RSS covered the northern half. The home base of this unit has not yet been positively identified.

Aircraft used by 'P' Sqn include:-

Type	Qty	Service	Base	Badge	Serial Examples
Bell 205/AB205	207	Early 80s - 1982	?	76	
Bell 212	297	Early 80s - Present	?	76	048, 073

'Q' Squadron (SHS - Second Helicopter Squadron)

Role: Observation/Light Transport/Primary Training

The Second Helicopter Squadron (SHS) was first formed around September 1965 as a Primary Training School for helicopter pilots. It's initial equipment comprised a dozen or so Bell 47Gs obtained from the French Air Force, together with a handful of Alouette IIs transferred from RSS Sqn. In addition to pilot training, the unit also flew observation, liaison and light transport missions. During the early 1960s, the Alouettes were reportedly used to test anti-tank tactics with French made SS-10 and SS-11 missiles. In the event, the Six Day War saw the Alouettes and Bell 47s being used only for observation, artillery spotting and light transport/liaison tasks. No losses were suffered. Later in 1967, a further 11 ex-French Alouettes were received, procured via an intermediary customer to avoid the French arms embargo on Israel. These Alouettes quickly replaced the less versatile Bell 47s.

To supplement the Alouettes a more modern type, in the form of Bell OH-58A Jet Rangers, commenced delivery in July 1971. Both types operated side by side during the Yom Kippur War, in similar roles to those previously, again with no loss. Additional Italian-built Agusta AB206s were being delivered by 1975, and this allowed most of the remaining Alouettes to be retired - although two were reported to be still in service in 1982 for VIP transport.

In July 1980, the Israeli Navy acquired its first helicopter capable fast missile boat. A number of trials were conducted with Bell 206s and H500 Defenders, but neither were found to be suitable for marine operations. The Aerospatiale Dolphin was selected instead - see 'E' Sqn. More recently, a small number of Bell 206L Long Rangers have been introduced, to supplement the existing Bell 206s. These are currently used for primary training, observation and commander transportation.

Aircraft used by SHS include:-

Type	Qty	Service	Base	Badge	Serial Examples
Bell 47G/AB47G-2	13	Sept 65 - 1968	Hatzerim		08
SE3130 Alouette II	8	Sept 65 - 1975	Hatzerim		01
SA318C Alouette II	7	late 67 - 1982	Hatzerim?	77	012
Bell 206A/OH-58A	15?	July 71 - Present	Dov Hoss? (Sde Dov)	77	101
Agusta AB206A	12?	Oct 72 - Present	"	77	123, 125, 126, 138
Bell 206R/OH-58B	6?	late 70's - Present	"	77	
Bell 206L/OH-58D	6?	late 80's - Present	"	77	

'R' Squadron

Role: ECM/ELINT

The 'Reconnaissance and EW squadron' is the most secre-

tive of any IDF/AF unit. Its many roles include all forms of electronic reconnaissance (ELINT, SIGINT, COMINT), electronic warfare (ECM,ECCM) and covert conventional reconnaissance. Some of these roles are performed by specially modified versions of existing service types.

The unit was formed sometime 1970, with specially equipped converted Vautour IIN night fighters. Two OV-1D Mohawks were delivered in 1974, followed a year later by a few Beech RU-21s. These aircraft were used for electronic surveillance, to monitor activity over Israel's borders and especially in the Sinai. In 1986 a few RC-12D surveillance aircraft arrived (via the US Army) to replace the Mohawks.

Aircraft used by 'R' sqn include:-

Type	Qty	Service	Base	Badge	Serial Examples
Vautour II.IIN	1+	1970 - late 1972	?		70
OV-1D	2	1974 - 1986+	Oestina (Kfar Sirkin)		4X-JRA, 4X-JRB/056
Beech RU-21A/D/H?	7+	1975 - Present?	"		108
Beech RC-12D	5	1986 - Present	"		4X-FSA/974, B/977, C/980, D/982, E/985

#### 'S' Squadron (No Nickname Known)

Role: Airborne Early Warning

First delivered in mid-1978, the small force of Grumman E-2C Hawkeye AEW aircraft have proved their worth many times over; allowing IDF air, naval and ground forces to be deployed with maximum efficiency and effectiveness. They played a vital role in the air battles with Syria during the Lebanon War of June 1982.

Aircraft used by 'S' Sqn include:-

Type	Qty	Service	Base	Badge	Serial Examples
E-2C	4	July 78 - Present	?	7A	941, 942, 944, 946

#### 'T' Squadron ("Flight Test Centre")

Role: Trials & Evaluation

Although not a true squadron, this unit is included for completeness. The evaluation unit is dedicated to flight testing and evaluating aircraft and weapons systems for the IDF/AF. This includes equipment proposed for IDF/AF procurement and also captured enemy types. The highly experienced pilots are often called upon to fly unusual aircraft and helicopters with minimal briefing and technical backup.

Captured aircraft are usually passed on to the IDF/AF museum at Hatzerim after evaluation, although certain key types

have found their way to the USA for further testing. The unit has no dedicated aircraft as such, normally borrowing aircraft as and when needed.

Aircraft types tested include:-

Type	Qty	Service	Origin:	Badge	Serial Examples
Yak-11	1+		Egypt	-	591
Gomhouria	1+		Egypt	-	551
HiG-17	2+	12 Aug 68+	Syria	-	1522
HiG-21F-13	1+	16 Aug 66+	Iraq defected	-	534(007)
Hi-4	1+			-	
Hi-8	1+	Oct 71+	Egypt captured	-	
HiG-23HLD Flogger-G	1	11 Oct 89+	Syria defected	-	2786
SA342L Gazelle	2	June 82-1988+	Syria captured	-	1122
F-16A	1+	1993		79	299

#### 'U' Squadron ("Ibex Squadron")

Role: Attack

This relatively unknown unit is thought to have originated as a Magister squadron manned by QFIs and ground crew from the Flight School.

Around 1972/73 the unit converted to A-4 Skyhawks, using aircraft from 115 squadron. It thus became the last unit to convert to the type. Ibex squadron subsequently disbanded at an unknown date. The identity 121 sqn was been suggested for this unit.

Aircraft used by 'U' squadron include:-

Type	Qty	Service	Base	Badge	Example Serials
Magister	45	1961 - 1972	?		
A-4H	20+	1972/73 - ?	?	80, 81	147
A-4F	?	1972/73 - ?	?	80, 81	611

This article concludes the review of known IDF/AF squadrons and aircraft. Since the response of readers so far has been very good, I intend to carry on and produce a further article, updating and correcting the entry of each squadron covered in Parts I-V of this series. So if you have any comments or corrections to make - send them in now!

#### Additional References:

38. Israeli Air Force Magazine Dec 1992
39. G-Suit (Halperin & Lapidot)
40. Air Forces Monthly July 1993

John Hayles (SAFCH #463), 14 Meadow Garth, Beverley High Road, Hull, North Humberside, HU6 7YJ, England.



white



dark red



dark blue



black



yellow



light grey



bright red



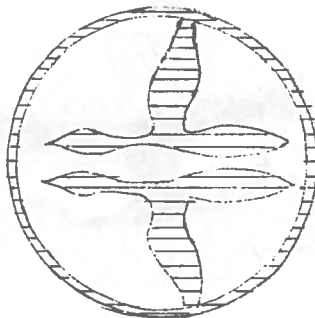
medium blue



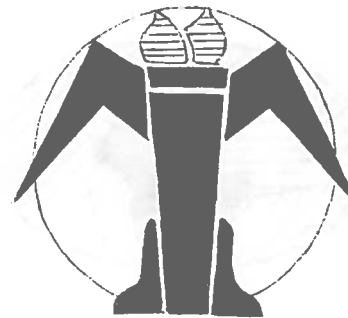
orange



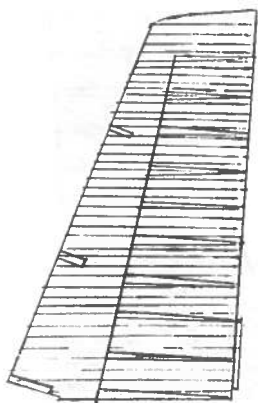
**Figure 67**  
Flight School  
(cockpit/fin)



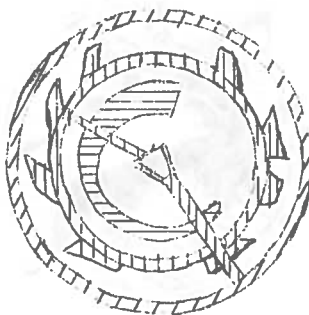
**Figure 68**  
Aerobatic Team  
(below cockpit)



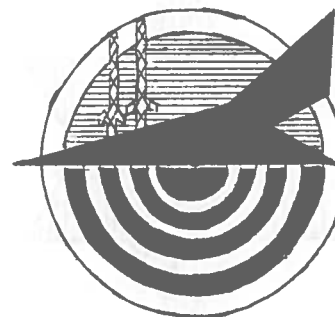
**Figure 69**  
Flight School  
(tail fin)



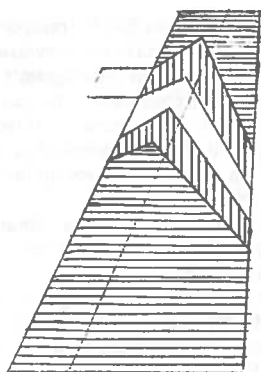
**Figure 70**  
Flight School  
(rudder)



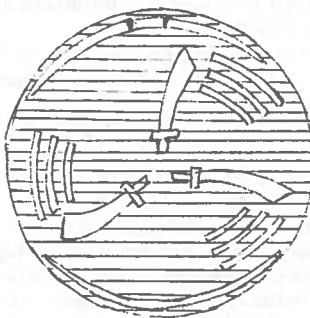
**Figure 71**  
Flight School  
(tail fin)



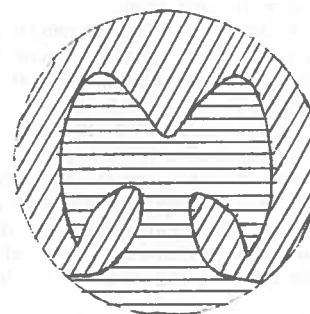
**Figure 72**  
201 Sqn  
(tail fin)



**Figure 73**  
201 Sqn  
(rudder)



**Figure 74**  
'O' Sqn  
(tail fin)



**Figure 75**  
'O' Sqn  
(tail fin)

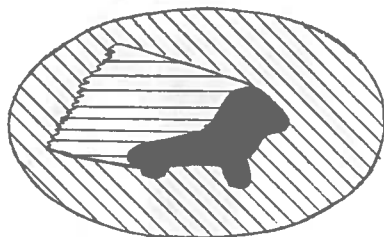


Figure 76  
'P' Sqn  
(tail fin)

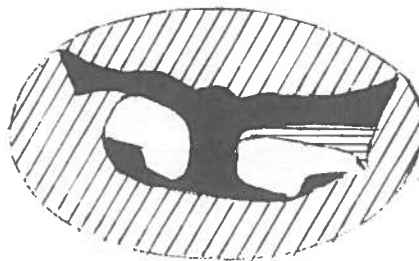


Figure 77  
'Q' Sqn  
(tail fin)

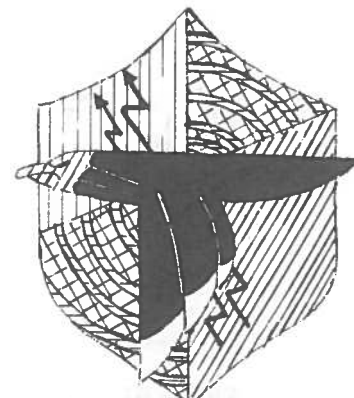


Figure 78  
'S' Sqn  
(below cockpit)

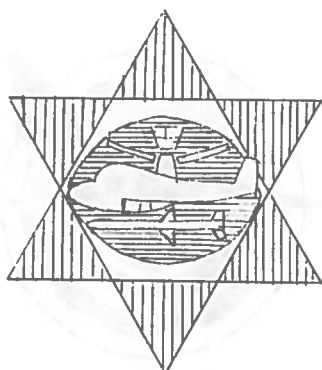


Figure 79  
'T' Sqn  
(tail fin)



Figure 80  
'U' Sqn  
(tail fin)

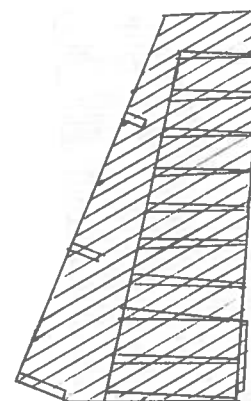


Figure 81  
'U' Sqn  
(tail fin)

## AEREI and AEREI MODELLISMO 1991-1993 ROUNDUP

Continued from page 108.

East European MiG-21 nose art with 14 photos; a review of every 1/72 MiG-29 kit.

- April '92: Building the Djinn 1/72 resin kit of the Reggiane 2005 WWII fighter; two giant color drawings of Iraqi and Yugoslav MiG-29 with some detail sketches; a review of 1/72 Su-25 kits.

- May '92: Two article on the P-51, the first dealing with Italian machines after WWII (4 photos, 3 line drawings, and a color drawing), the other about a Philippine a/c with markings from Microscale sheet 72/149; the giant color drawing of a South African F-86F; an article on the Heller and Hobbycraft 1/72 MiG-23 with color drawings of Syrian and Indian machines.

- June '92: An article on improving the Airfix kit of the SM.79 Sparviero.

- July/August '92: A great article on how to build an Italian F-104S from the Hasegawa 1/32 kit.

- September '92: Nothing of Small Air Forces' in-

terest.

- October '92: A review of the Aeroclub 1/72 Aeromacchi MB.339 trainer with instructions to convert it to the MB339K attack version.

- November '92: An article on the MiG-17 with 6 photos of Polish and Chinese a/c and some detail drawings.

- December '92: F-18 color profiles including Canada, Spain, and Australia; an article on the Mitsubishi A5M Claude with some color profiles.

- January '93: A review of 2 limited-production 1/72 kits of the AMX with 4 photos of the real a/c.

- February '93: 6 color photos of Italian Hughes 500; an article on converting the Heller 1/72 Boeing 707 into an Italian AP tanker - unfortunately this article is entirely descriptive with no drawings to explain the conversion.

- March '93: An article on Italian Army Jet Rangers with instructions to convert the Italeri 1/72 kit of the OH-58; an article on converting the Airfix 1/72

SM.79 Sparviero into a SM.83 transport a/c.

- April '93: Three article on conversions: a 1/48 Singapore TA-4S from Monogram's A-4E and OA-4M, a 1/48 French F4U-7 from the Academy Minicraft F4U-4, a 1/72 Greek A-7H from Fujimi's A-7E and D with 5 color photos of the real a/c.

- May '93: An article on improving the Airfix 1/72 Fiat G.50 Freccia.

- June '93: An article describing all the available kits of the F-104 with 4 photos and color details for Italian Starfighters.

- July '93: An article describing the 2 kits of the Macchi Mc.200 fighter of WWII with 3 photos, color details, and improvement to the models.

- August '93: An article describing the Heller and Hobbycraft kits of the De Havilland Vampire FN.5 and NF.10 with color details for Italian machines; a giant color drawing of a Danish F-100D.

Compiled by Mario Bartoli (SAFCH #719), Via R. Fucini 48, 56127 Pisa, Italy.

"I am preparing three volumes for Squadron/Signal Publications on the following subjects: (1) Heinkel He 112 for the 'In Action' series. (2) Henschel Hs 129 also for the 'In Action' series. (3) History of the Royal Rumanian Air Force for the 'Special'. I am looking for information, data and mainly photographs on these themes. All contributions will be acknowledged and the contributor will get a free presentation copy of the publication. Denes Bernad (SAFCH #1315), 1265 Davenport Rd., Toronto, Ontario, M6H 2H2 Canada.

"I would like to correspond with anyone having information on the following: (1) Slovak AF operation over Poland in September 1939, especially the raid on Tarnopol. This operation is mentioned in several publications, but details are lacking. Information on the types and number of aircraft employed, damage assessment, opposition by the PAF, combat losses, etc. would be very much appreciated. (2) I'm also interested in information on any operations by Baltic air forces opposing the Soviet takeover of 1940, or in support of the German invasion of 1941. I have read that the Lithuanian Air Force attacked retreating Soviet army columns during 1941. I have also read that the Latvian AF resisted the Soviet takeover in 1940, but can't find any detailed information. Also, I know the Estonians partially re-established their AF under German control and provided pilots for Nachtschachtgruppen night-attack squadrons. Did any of the other Baltic states do the same?" Glenn Cekus (SAFCH #1278), 10505 Forest Lane, Chicago Ridge, IL 60415.

"I'd like to hear from anybody with info or photos of the Sikorsky H-19 and Piasecki H-21, civil or military, any nation. All items loaned will be copies and returned, generally within six weeks. Material published will be credited, and the contributor will get a copy of the publication. Contact with former aircrew would be especially welcome." Lennart Lundh (SAFCH #1218), 16236 S. Haven Ave., Orland Hills, IL 60477-5949, USA.

"I have completed the first 'release' of my 'Encyclopedic Index' to the aircraft of the 1939-45 War, which is a list of which belligerents operated which aircraft. Since I know there are SAFCH readers out there who know a lot more than I do about particular countries, I would like to enlist their help in reviewing the list for mistakes and omissions. My goal is to 'finish' by 2 September 1995!"

Please contact: Wesley Moore, 5802 NE 59th At., Seattle, WA 98105, USA.

[Editor's note: Wesley's list is too long to publish here (15 pages of small print), but his 'Forward' (reproduced below in an abbreviated version) ex-

plains what he is trying to do and how you can help. If you can help, write to Wesley explaining where you can help, and he'll send you a copy of the pertinent parts of his list.]

"This is the start of my humongous 'Encyclopedia of WWII Aircraft' project. It will be a list of all aircraft used by the belligerents, incorporating as much of the (non-graphic) information on each aircraft as makes sense. Before I can make a database of all the WWII aircraft, I gotta have list of the a/c to enter. This is my first crack at it.

"The 'Encyclopedia' is intended to cover all belligerents, whether they flew in combat or not, for the time period during which they were belligerent. So, no Sweden or Portugal at all (they were neutral the whole damn time), and no Ecuadorian a/c from 1940, since they didn't declare war on the Axis until 1945. Each country's dates of belligerence are listed beside their name (parenthesis indicates undeclared hostilities).

"A country's a/c is defined as those which served under its own insignia. Thus, no Yaks from the Normandy-Neiman listed under France, etc.

"Each aircraft is listed by the name that applies; for example, if the country bought it directly from Curtiss, it's a Hawk 75, if the US War Dept. was the donor, it's a P-36, and if the Brits, it's a Mohawk. This will eventually make finding the right version in the Aircraft List easier.

"The goal is to list the aircraft by sub-type. Where no sub-type designation appears, the source did not mention it, or it got lost in the shuffle.

"Another goal is to list all the military a/c from each country, not just the combat types. The list is to include production a/c (no prototypes) purchased by armed forces (no impressments, or joy-rides). These boundaries are, of course, fuzzy: pre-production a/c saw service evaluation in combat, some a/c were produced but never issued to a squadron, the Finns had to use captured a/c, obsolete a/c were used as trainers and hacks until they were written-off or just shoved to the edge of the field, and some types were just too late to have a crack at the enemy.

"Some day, a list like this needs to be expanded into an 'Order of Battle' with the equipment listed for each unit by date of service. This would be a truly massive undertaking, and I ain't the one to do it!

"Anyone sending in corrections/updates/whatever will receive subsequent versions of this list, and at least the first version of the 'Encyclopedia'."

"WANTED: Books: Green 'Airplanes of the Third Reich', Francillon, 'Japanese Aircraft of the Pacific War', Bunrin-do 'Japanese Military Aircraft Illustrated' Vol. 1-3, 'Monogram Official Painting Guide'. 1/72-scale kits: Revell Sally (will pay \$75), Nick, Hellen, Francis, FW-200 military; Italeri He-11Z Zwillig, Me-323 Gigant, Hadrian, Horsa. 1/35

scale Tamiya Matilda, Saladin, Ambulance Rover, Saladin Scout Car.

FOR EXCHANGE I offer all kits, books, journals, decals that are available in Poland and former Soviet Union. New injection-molded kits from Eastern Europe: 1/35 scale BT-5m T-38, T-60, ZIS-3, PAK 40 German field gun, 120 mm Soviet mortar & 4 crewmen, Soviet Tank Crew, Su-76, Ba-20; 1/72 scale Tupolev ANT-25, Polikarpov I-3, I-4, I-15, R-5, I-185, Su-25UB, Su-9, La-5, La-15, La-176, Beriev Be-4 (KOR-2) seaplane, Gligorovich M-5 seaplane, J-22 Swedish fighter, Fokker F-VII Southern Cross, Wyvern, & Yak-4, Yermolayev Er-2, Pe-2, Pe-3, Fokker F-VII with floats; 1/48 scale Polikarpov I-153 vacu + metal parts + photoetched, Yak-3 vacu + metal parts, La-7 vacu + metal parts, Su-15, Su-22, Morane G; paper models 1/25, 1/33, 1/48, 1/100, & 1/200 scales; decals Travers, HDL, Techmod, etc.

Bogdan Braniewski (SAFCH #802), PO Box 20, 05-075 Wesola, Poland. Fax (482) 77 39 662 or (482) 628 91 19.

"I would like to ask our members (especially those in France) for help. I need information about the French Air Force in Indochina up to 1945, i.e. during the Pacific War and before. I especially need information of the types of aircraft used, camouflage and markings, pilots, units, combat against Siam, etc., and anything else. I hope there is somebody out there able to help."

Vladimir Stepanek (SAFCH #829), Na Vinici 458, CZ-274 01 Slany, Czech Republic.

"DISPOSAL: Aviation books & magazines. SASE for list."

Stephen Miller (SAFCH #342), 1637 Hugo Circle, Silver Spring, MD 20906, USA.

"I need drawings of the Vought V99M that was delivered to Mexico in January of 1938. Good, bad, or indifferent, I need these drawings. Also, the address of Vought's public relations department." Wayne Denny (SAFCH #422), 5113 Gaviota Ave., Long Beach, CA 90807, USA.

"Wanted: 'Air Aces of the Austro-Hungarian Empire', by Martin O'Connor."

Ron MacDonald (SAFCH #1331), 620 2nd Street West, Cochrane, Alberta, Canada T0L 0W1.

"FINAL DISPOSAL: Over 200 new books and magazine titles have been added to my first disposal list. For copy of list send a legal-size SASE to the address below."

Wilke B. "Burt" Leake (SAFCH #665), 4291 Larchwood Place, Riverside, CA 92506, USA.

## -accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-accessories-

"I am sending you some paints for Swedish Air Force colors that I have had produced by Xtracoior. Please make these available to SAFO readers. OlivGrun (328), MorkBla (438), and BlaGra (058) are the colors used on the J35 Draken, Sk50 Safir, Sk51 Bulldog, J32 Lansén, and the Sk60 SAB 105. BlaGra (058) was the standard undersur-

face color on most Swedish a/c since 1940. OlivGrun (328) is also used on Swedish Hercules. MorkGron (325) was used on most Swedish a/c between 1935 and 1980.

"Only 100 tins of each color were produced so this is more or less the last of these colors until I order more. These colors are mixed to match the original

colors, so they'll need some white to achieve the proper 'scale effect'."

Jens Lindell (SAFCH #1341), Hobby-Importen, Box 3131, S-600 03 Norrköping, Sweden.



